

Bay City Junior College



INCLUDING

**Bay County
Normal School**

**1949
1950**

BAY CITY JUNIOR COLLEGE

AND

BAY COUNTY NORMAL SCHOOL



ANNOUNCEMENTS

1949 - 1950



A municipal institution which provides
two cultural and technical years of college.

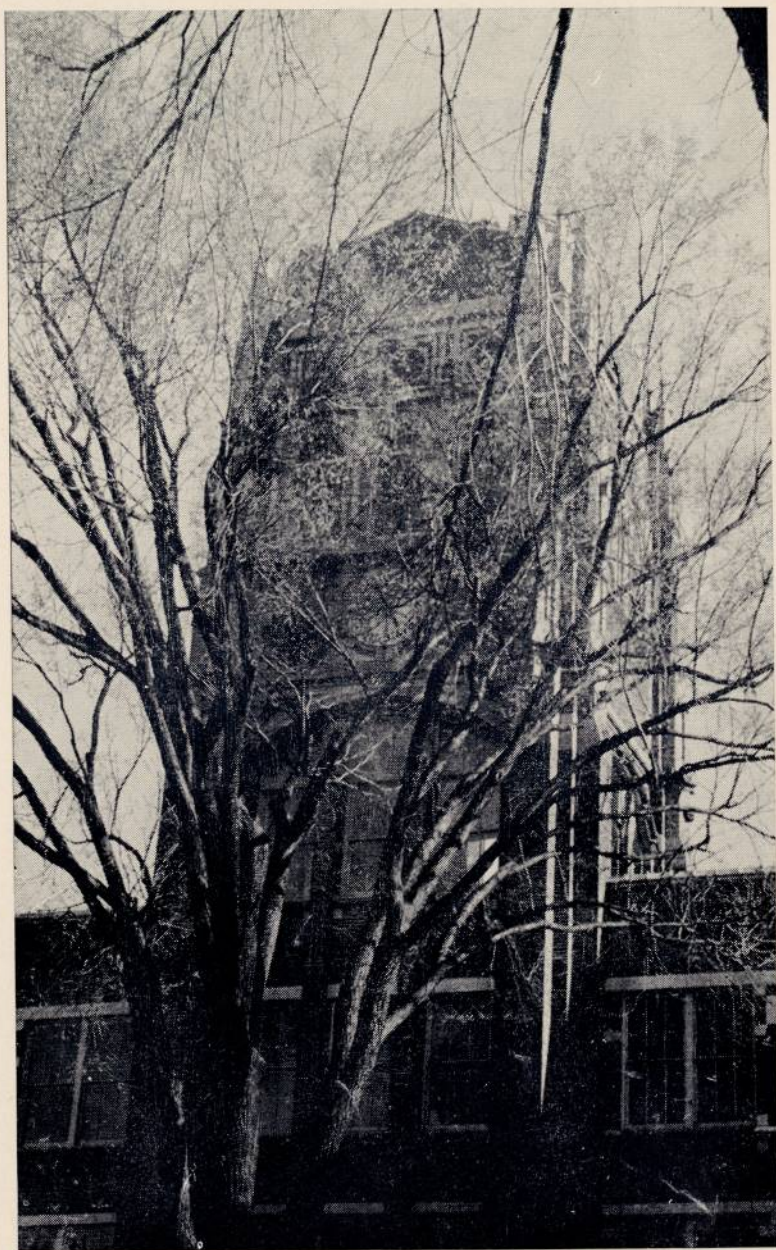
Accredited by the
NORTH CENTRAL ASSOCIATION
OF COLLEGES AND SECONDARY SCHOOLS



Telephone 8518

Columbus at Hampton

Bay City, Michigan



ENTRANCE REQUIREMENTS

(See also page 19)

Plan 1**For the first two years of a four-year college course.**

The student should meet the entrance requirements of the senior college for the curriculum selected.

Deficiencies: The student who wishes a four-year course, but who is deficient in sequence or subject requirements, may enroll under plan 2 until the deficiencies have been removed.**Plan 2****For students wishing only two years, or less, of college work.**

Admission is based on high school graduation and the principal's recommendations without reference to major or minor sequences.

Plan 3**For VETERANS who are not high school graduates.**

Veterans may be examined by our Testing Service. If the results of the tests indicate ability to do regular college work, full admission will be granted.

Plan 4**Special Students.**

Veterans and other adults who do not meet the requirements of one of the plans indicated above, may enroll as Special Students.

CALENDAR**1949 1950****First Semester**

1949	
August 29, 30.....	Placement examinations for new students
September 9.....	Registration of returning students
September 12, 13.....	Registration of new students
September 14.....	Classes start at 8:00 a.m.
November 14.....	Mid-Semester grades due
November 24, 25.....	Thanksgiving recess
December 23.....	Christmas holidays begin (evening)
1950	
January 3.....	Resumption of classes (8:00 a.m.)
January 16 to 20.....	Semester examinations

Second Semester

January 17.....	Placement examinations for new students
January 24, 25.....	Registration
January 26.....	Classes start
March 27.....	Mid-Semester grades due
April 7.....	Spring holidays begin (evening)
April 17.....	Resumption of classes
May 29 to June 2.....	Semester examinations
May 30.....	Memorial Day no classes
June 4.....	Baccalaureate services
June 6.....	Annual Spread
June 9.....	Commencement

SUMMER SESSION**Tentative**

June 6, 7.....	Placement examinations for new students
June 9.....	Registration
June 12.....	Classes start
August 4.....	Summer session closes

(This calendar is subject to change)

BAY CITY BOARD OF EDUCATION**ADMINISTRATIVE OFFICERS**

Charles B. Park, M.A.....	Superintendent of Schools
L. J. McCully.....	Business Agent
A. G. Nelson.....	Acting Auditor

MEMBERS OF THE BOARD

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S. Dillon Foss	Gilbert Leppelmeier
J. W. Hebert	B. M. Lodewyk
Russell H. Smith	

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Mrs. Elaine Riegel Soderquist.....	Secretary
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FACULTY

ERIC J. BRADNER, Dean.

Principal of Bay County Normal School.

A.B., Occidental College; M.A., Ph.D., Northwestern University
Additional graduate work: University of Southern California
and Stanford University.

GEORGE E. BUTTERFIELD, Dean Emeritus.

A.B., M.A., University of Michigan.

Dean, 1926-1949.

IRMA ANSCHUTZ, German, Latin.

A.B., M.A., University of Michigan. Additional graduate work:
University of Michigan; University of Wisconsin; and University
of Colorado.

JEAN R. BROWN, Shorthand, Typewriting.

A.B., Central Michigan College of Education; M.A., University
of Michigan

LOREN CADY, Music.

A.A., Bay City Junior College; B. Mus., Oberlin College; M. Mus.,
University of Michigan.

H. R. EVANS, Music.

B. Music. University of Michigan; Mus. D., Alma College.

META EWING, Mathematics.

B. S., M. S., Michigan State College. Additional work: Michigan
State College and University of Chicago.

GRACE E. FETTIG, Registrar.

B. S., Central Michigan College of Education; M. S., University
of Michigan

SAMUEL J. FREED, Chemistry, Physics.

A. B., Northern Michigan College of Education; M.S., University
of Michigan

G. M. FRENCH, Economics, Placement, Director, Veterans Institute.

A. B., Alma College; M. A., University of Michigan

SENA G. FRENCH (Mrs.), Accounting, Economics.

B.S., Western Michigan College of Education.

J. H. GEORGE, Astronomy, Geology

B.S., M.A., University of Chicago. Additional graduate work:
University of Chicago and University of Iowa.

ERMA JOAN HELLMUTH, Spanish.

A.B., M.A., University of Michigan. Additional graduate work
Centro de Estudios, Madrid; Centro de Estudios, Mexico; Diplo
ma of Sufficiencia, Centro de Estudios Historicos, Madrid. Three
summers study and travel in Brazil, Argentina, Chile, Bolivia,
Peru, Ecuador, the Panama Canal Zone and the West Indies.

ADA E. HOBBS, English.

A.B., M.A., University of Michigan. Additional graduate work:
University of Wisconsin and University of California.

ERMA B. HODGSON, Geography, Sociology

A.B., M.A., University of Michigan. Field work in Japan. Lecture course, Nippon Cultural Institute, Karuizawa, Japan. Reconnaissance: China, Hong Kong, Philippine Islands, Eastern and Western U. S. and Canada. Social work: Christopher House Settlement, Chicago; World War Measure Hospital, Bay City; University of Michigan Hospital, Ann Arbor.

PALMER B. KERN, Director of Athletics, Physical Education.

A.B., B.S., Western Michigan College of Education.

LIBBIE KESSLER, Librarian, Library Science.

A.A., Bay City Junior College; A.B., University of Michigan; B.S.L.S., University of Illinois.

GLADYS M. KLINGBEIL (Mrs.), English.

A.B., Aberystwyth College, University of Wales; M.A., University of Michigan. Additional graduate work: University of Michigan.

H. C. KLINGBEIL, Speech, English, Political Science.

A.B., Pennsylvania State College; M.A., University of Michigan. Additional graduate work: University of Pennsylvania; University College of Wales, Aberystwyth; London School of Speech and Drama; Oxford University, and University of Wisconsin.

ELIZABETH KRAFFKA, Biology

A.B., Lake Forest College; M.A., University of Wisconsin. Additional graduate work: Marine Biological Laboratory, Woods Hole, Massachusetts; University of Iowa and Rocky Mountain Biological Station, Colorado.

REINHART J. KRAUSE, Shop Practice.

B.S., Western Michigan College of Education. Graduate work at the University of Michigan.

OLIVE L. LAGDEN, French.

A.A., Bay City Junior College; A.B., M.A., University of Michigan. Additional graduate work: Boston University and Western Reserve University

NELLIE MAY MCGREGOR, English.

B.Pd., Michigan State Normal College; A.B., M.A., University of Michigan.

KENNETH A. NORRIS, Head Basketball Coach.

A.B., Central Michigan College of Education; M.A., Teachers College, Columbia University

HARRY G. PARKS, History, Political Science.

A.B., Michigan State Normal College; M.A., Colorado State College of Education; M.A., University of Michigan. Graduate Army Administrative School, Adjutant General Department. Additional graduate work: Wayne University; University of Denver; University of Arkansas; Illinois State Normal University

KATHLEEN B. PLUM (Mrs.), Art.

B.S., University of Wisconsin. Graduate work at University of Wisconsin; Columbia University; University of Michigan; and Michigan State College.

FLORENCE PRESLEY (Mrs.), Assistant Librarian.

Life Certificate, Michigan State Normal College.

FRED B. ROGERS, Physics.

A.B., Morningside College, Iowa; M.S., University of Michigan.
Additional graduate work: University of Chicago and University of Michigan.

ADA I. ROYAL, Physiology and Hygiene, Psychology

B.S., Michigan State Normal College. Graduate work: University of Michigan and Columbia University; M.A., University of Chicago.

CLARENCE SCHULTZ, Bursar Veterans' Counselor.

A.A., Bay City Junior College.

*EARL W. SMITH, English.

A.B., M.A., University of Michigan.

A. EDWARD STILES, History

A.B., M.A., University of Michigan.

ROBERT M. STUART, Director, Dept. of Continuing Education.

A.B., Central Michigan College of Education; M.A., University of Michigan.

MARILYN J. STUMP, Physical Education.

B. S., Michigan State College.

WALTER E. THORSBERG, Mathematics.

A.B., M.A., University of Michigan.

LOUIS K. UEBERHORST, English.

A.A., Bay City Junior College, A.B., M.A., Ph.D., University of Michigan.

HELEN C. WATSON (Mrs.), Recorder

Life Certificate, Michigan State Normal College.

CAROLYN K. WHITE, Supervisor of the Training School and Instructor in Education.

B.S., Michigan State Normal College; Life Certificate, Michigan State Normal College. Additional work: Ohio State University; Western Reserve University; Milwaukee State College; and Columbia University

W. A. L. WILLARD, Mathematics and Mechanical Drawing.

B. S., Michigan State College; M.A., University of Michigan.

FRED J. WILLIAMS, Chemistry

B.S., Michigan State College; M.A., University of Michigan.
Additional graduate work at the University of Chicago.

MARION L. WOODFORD, Chemistry

B.S., Central Michigan College of Education. Graduate work: Michigan State College.

ROSE R. ZIELINSKI, Testing and Guidance.

B.S., Michigan State Normal College. Graduate work: Teachers College, Columbia University; Colorado State College; New York School of Social Work.

ADRIAN F. ZWEMER, Chemistry

A.B., Hope College. Graduate work: Northwestern University and New York State Teachers College.

* On leave, 1949-1950.

FACULTY ORGANIZATION

Many of the members of the faculty have teaching and administrative duties in Central High School or in some other part of the city school system.

Faculty Council: A number, approximately equivalent to a full-time faculty are assigned by the Superintendent of Schools to responsibility for student activities, for student advising, and for academic and administrative problems in Junior College. These latter instructors, together with the Dean, the Registrar, the Recorder, and the Bursar, constitute the Faculty Council. Membership in the council is subject to change from one semester to another.

Standing Committees of the Faculty Council:

The committees, wherever practicable, will work in cooperation with the student organizations or with officers and committees of the Student Union.

COMMITTEE CHAIRMEN

Administrative —

Administrative Policies.....	Dr. Bradner
Educational Studies.....	Mr. Williams
Library and Study Facilities.....	Mr. Smith
Personnel Services.....	Mr. Rogers
Public Relations.....	Mr. Thorsberg
Scholarships and Awards.....	Mr. George
Veterans' Affairs.....	Mr. Schultz

Curriculum Advising —

Business.....	Mr. Parks
Engineering.....	Miss Ewing
Liberal Arts.....	Miss Hobbs
Sciences.....	Mr. Zwemer

Departmental —

Business and Economics.....	Mr. French
English.....	Miss McGregor
Mathematics.....	Miss Ewing
Science.....	Mr. Rogers

Student Activities —

Debating and Dramatics.....	Mr. Klingbeil
Publications.....	Miss McGregor
Public Meetings.....	Mr. Parks
Social Affairs.....	Miss Hodgson
Sports.....	Mr. Freed
Women's Affairs.....	

Professional Interests (Elected by the Faculty) —

Miss Hobbs, Chairman; Mr. Parks; Mr. Thorsberg.

GENERAL INFORMATION

HISTORY AND LOCATION

In July, 1922, in accordance with Act 146, P. A. 1917 of the State of Michigan, the Bay City Junior College was established by the board of education as a part of the Bay City School system. It is housed in the Central High School building on Columbus Avenue, where the class rooms, laboratories, auditorium, gymnasium, swimming pool, and cafeteria are available to college students.

The University of Michigan assisted in organizing the college by advising as to what courses to offer and by tentatively approving both courses and instructors. The college was opened in September, 1922, to a freshman class. During the spring of 1923, the Junior College Accrediting Committee of the University examined the new institution as to instruction, laboratory equipment, library facilities, and other fundamentals. As a result, the Bay City Junior College was placed on the University's accredited list of junior colleges. The work of the sophomore year was added to the college curriculum in September, 1923, making it possible for graduates to enter the senior colleges as juniors and to get the bachelor degree in two years of additional work.

It has at all times been the aim of the college administration to deserve the confidence on the part of the colleges and universities of Michigan. This has enabled the graduates of Bay City Junior College to enter those institutions with full credit for work satisfactorily completed here and also to enter colleges and universities in all parts of the United States.

Formal graduation was not instituted until June, 1926, when twenty candidates were awarded Associate titles and one was granted the teacher's certificate.

The college was examined by the commission on higher education of the North Central Association of Colleges and Secondary Schools, as a result of which it was placed on the association's accredited list of junior colleges in April, 1927.

Since the college was organized, the primary purpose has been to offer programs that are closely equivalent to those of the first two years of a four-year college course. This is what most of the parents and students demand. However, it soon became evident to the faculty that a rather large proportion of those entering did not complete the two years of junior college work, and still others ended their formal education upon graduation. Plans were soon made, therefore, for two-year programs that would give some general education and at the same time prepare students for employment.

The first such program was for rural teaching. The graduate received a three-year teachers' certificate from the State Board of Education. This certificate was later discontinued, and in 1934 the teachers' two-year program was merged with the Bay County Normal School which became an integral part of the Bay City Junior College. Its teacher training program was expanded from a one-year to a two-year course, with full transfer credit to the teachers' colleges of Michigan. A Combined Curriculum has since been arranged with Central Michigan College of Education and approved by the State Board of Education. Graduates of this program receive the State Limited certificate by attending Central Michigan College one summer.

In 1929 the college offered an Industrial Engineering curriculum, complete in two years in preparation for employment in semi-professional engineering fields such as drafting, patternmaking and machinework. And in 1931 two-year programs were initiated in

Accounting, General Business, and Secretarial work. These two-year programs have been expanded in the ensuing years as rapidly as the college facilities and the student demand would allow.

At present it is the desire of the Board of Education that the Junior College serve as a community college, meeting, as far as possible, all of the educational needs of the community beyond the high school level. In line with these plans the Veterans Institute and the Department of Continuing Education are this year organized as units of the Bay City Junior College.

PURPOSE

The purpose of the Bay City Junior College is at least threefold:

- I. To Prepare students for further college work.
 1. It provides the first and second years of college work for students who expect to take general college training in a standard four-year college.
 2. It provides the first and second years of college work for students who expect to enter the professions such as business administration, engineering, medicine, dentistry, law and teaching.

(Credits from the Bay City Junior College are accepted by the University of Michigan, Michigan State College, state teachers' colleges and other standard colleges throughout the country)
- II. To provide two years of college work which are more or less complete in themselves, such as semi-professional work, preparing students for more efficient work in local or other factories and in business and professional offices.
- III. To give cultural work of from one to four semesters' duration for those living in and around Bay City who are interested in literature and the arts, or in other branches of learning, which they have not had the opportunity to pursue. Adults who have had some college training, or who have not finished a formal training, or who would enjoy a review of favorite college subjects, are welcome in these courses, in only one or more subjects, if registration requirements are complied with.

EDUCATIONAL OPPORTUNITIES FOR VETERANS

The Bay City Junior College has been approved by the Veterans Administration for the education of veterans under the provisions of the Veterans Rehabilitation Act (Public Act 16), and under the Veterans Readjustment Act (Public Act 346, the "G. I. Bill")

Every facility of the college has been placed at the disposal of veterans. Important among these is the **Counseling Service**. The veteran is invited to come and discuss his educational problems with the dean and with the faculty advisers well qualified in particular subject fields. Aptitude and training tests are available through the Testing Service. Our aim is to help each veteran plan a program of studies suited to his individual ability, background, and objectives. Deficiencies in high school subjects may be covered rapidly. Refresher work may be taken before the veteran attempts advanced work in a subject.

Credit for special schools conducted by the Armed Forces and for courses completed through the United States Armed Forces Institute are accepted to the extent recommended by the American Council on Education in its Guide to the Evaluation of Educational Experiences.

Many veterans can solve the "college housing problem" by living at home and attending Bay City Junior College. Also, the college assists students who need to find living quarters in or near Bay City.

Veterans Institute: To provide on-the-job and institutional on-the-farm training for veterans, a Veterans Institute has been organized as a part of the Bay City Junior College. It is approved by the Veterans Administration for veterans' training under Public Acts 16 and 346. Veterans wishing information about on-the-job training should contact the Director, G. M. French, at the Board of Education offices, telephone 3-6567.

Summer Session: Because so many veterans desired to accelerate their college program, an eight-week summer session has been provided. Although planned especially for veterans, other students are accepted. Applications for admission to the Summer Session should be filed as early as possible. Its continuation in 1950 will depend on the demand for classes.

CONTINUING EDUCATION

The Department of Continuing Education of the Bay City Junior College makes available to the members of this community a large number and wide variety of courses and activities in both the credit and noncredit fields. Residence and extension credit courses at both graduate and undergraduate levels in late afternoon, evenings, and Saturdays will be available this year through the facilities of the University of Michigan, Michigan State College, Central Michigan College of Education, and Bay City Junior College.

Noncredit adult afternoon and evening classes will also be available in five different centers in this community. These noncredit "learning for living" classes offer a considerable variety of courses and activities in the cultural, vocational, general educational, and avocational fields.

This office also annually co-sponsors educational series with several community organizations. Assistance in program planning, securing of personnel leadership, and some assistance in program financing is available. Requests should be directed to the director of the Department of Continuing Education, Robert Stuart.

FACILITIES FOR INSTRUCTION

The Faculty

All the members of the faculty are experienced teachers, with specialized training in their teaching fields. Some have taught in colleges and universities prior to their present appointments.

The Class Rooms

The class rooms, the shops, and the laboratories are well equipped.

The Libraries

In addition to the school library, used by both high school and junior college students, those in attendance here have easy access to the Bay City Public library and to the Sage library.

STUDENT SERVICES

The Cafeteria

The cafeteria is conveniently located on the first floor of the building. Conducted at cost and under the most modern methods,

the cafeteria offers well-balanced meals throughout the year at moderate prices.

The Bookstore

Students may purchase their books, either new or second-hand, in the Junior College Bookstore, in the Junior College business office. Operated without profit, the Bookstore offers students an opportunity to buy their own books and supplies at cost.

Placement Bureau

This bureau was installed to aid graduates of the Trades and Business curricula in obtaining positions. This service is now extended to all students and graduates who wish to register with the bureau. Students needing to work while in college frequently obtain part-time work. Many graduates are placed in desirable full-time positions. The Junior College does not guarantee a position to each graduate, but does give every possible aid in suitable placements.

COUNSELING, TESTING, AND ADVISORY SERVICES

Aptitude and training tests are available to all students.

An experienced counselor will assist the student in interpreting the test results.

Curriculum advisers. Members of the faculty act as curriculum advisers. They assist the student in selecting the courses for his particular curriculum. That selection will depend upon:

1. The student's preparation;
2. The requirements for the curriculum; and,
3. The requirements of the senior college — if the student plans to continue his education elsewhere.

ADVANTAGES

To Local Students

Attendance at the Bay City Junior College presents the following advantages to local students:

1. Home ties need not be broken until the students are more advanced in years.
2. The expense of college training is naturally reduced making it possible in many cases for students to receive college instruction who would not otherwise be able to do so.
3. The smaller classes afford greater opportunity for individual instructional attention and better acquaintance with the faculty members.
4. The fine modern building and equipment are much in advance of many colleges which have been longer established.

To Non-Resident Students

Students living outside the city limits whose accessibility to Bay City Junior College makes it possible for them to come from their homes daily, find the advantages as great as though they lived in the college town. Others in this part of the state, but living too far for the daily trip, are able to go home for week-ends which they would find impossible if attending colleges farther distant.

Those who wish to secure board and room should apply to the Registrar for a list of boarding and rooming houses.

CONDUCT OF STUDENTS

Junior college students are considered as having reached the age of responsibility and discretion. Their conduct, both in school and out, is expected to be dignified and unquestionable.

High Grade Work Demanded

College work is more difficult than high school work. It is essential that those who take up studies in this institution be ready to devote their best efforts to the work with a full realization that their success rests on their own shoulders. The Junior College could not justify its existence if it did not require the same kind of work and demand the same degree of personal responsibility as do the higher institutions of learning which many of its students are preparing to enter.

Attendance

Students are expected to attend classes, laboratory periods and assemblies regularly. Excessive absence may be considered as sufficient reason for reduction of credit or expulsion from college.

SCHOLARSHIP RECORDS

Examinations and Reports

At least two formal examinations are held each semester, known as the "mid-semester" and the "final", both required of all students. The exact time of the "mid-semester", however, is left to the discretion of the instructor. Reports are issued to students following the formal examinations, twice each semester. Students whose averages are low are placed on the Special list by the Personnel Committee.

The division of this group is made on the basis of individual needs into Special Problems Group, Warning Group and Probation Group. Re-instatement problems, study programs, and outside employment in its relation to college studies are considered by the adviser with student and parent co-operation.

Grades

Grades are recorded as follows: A-Excellent; B-Good; C-Fair; D-Deficient, passed without points; E-Not passed; I-Incomplete.

Incompletes and excused absences from examinations must be made up during the first month of the semester following that in which they were received.

Credit Points

Each hour of credit is valued in points as follows: A-Three honor points; B-Two honor points; C-One honor point; D-No honor points; E-No hours credit and negative one point unless the course is repeated and passed.

Only such students as have done satisfactory work can be recommended without qualification for advanced work in other institutions.

An Honor Roll is comprised each semester of students who have received honor points as follows:

Credit Hours Carried	Honor Points
15 or more	30 or more (2 per hour)
14	29
13	28
12	27 (2.25 per hour)

COLLEGE ACTIVITIES

The Student Union

The Bay City Junior College, through its Student Union, encourages athletics and club and social activities of the proper type, believing that those activities build an esprit de corps and furnish experiences which are conducive to the best development of the students.

The Activity fund enables the Student Council and the faculty to sponsor a varied program in sports, social affairs, group and club activities, bi-weekly and annual publication (the Crucible), and public relations.

Student Council

Participation of students in governing of Junior College activities is provided for by the Student Council, the administrative body of the Student Union. Consisting of four sophomores and four freshmen members elected from the student body at large, the Council has a real voice in the management of student affairs. With the advice of the faculty the Council supervises all student activities and determines appropriations from the Activity fund for their support.

Athletics

Athletic teams represent the college in intercollegiate contests including basketball, swimming, golf and tennis. The Bay City Junior College is a member of the Michigan Junior College Athletic Conference.

Both the women and men of the college take part in their respective intramural sports.

Publications

"The Crucible" takes the form of a newspaper issued every two weeks, with a "Crucible Annual" at the close of the school year. The cost of these publications is taken care of by the Activity fund, so that the distribution is gratis among the students.

Debating, Oratory and Dramatics

These activities are conducted under the direction of the Speech department and are open to all students of the college. Intercollegiate contests are arranged by the Michigan Junior College Debate League.

Business Ad Club

At monthly luncheon meetings members discuss business problems with local businessmen.

Campus Christian Organization

The purpose of this organization is to promote Christian fellowship, study and living in their relationship to college life and to better understanding of the world.

Engineers' Club

The Engineers' Club offers forum discussion in which technical students may make contact with industrial leaders of the state.

Lettermen's Club

Men who have received athletic awards are eligible for membership. The purpose of the club is to encourage sports and promote fellowship.

Music

The organization of musical groups, instrumental and vocal, is encouraged.

Phi Theta Kappa, Honor Society

The Beta Gamma Chapter of Phi Theta Kappa, national honor society for junior colleges, was established at Bay City Junior College in 1931. Election to membership is the highest academic honor a student can attain. The faculty annually invites to membership a limited number of students of high scholarship, of distinctive helpfulness to the college, and of outstanding character and personality as revealed in contacts with fellow students and instructors.

Socio-Geographic Group

The Socio-Geographic Group provides an outlet for discussion of an informal nature, along special lines of interest to the individual members. A free hour following the open forums provides a pleasant social activity. Membership is limited to twenty-five, the quota being filled each year by selection on the receipt of written applications.

Tetra-Sci

Through Tetra-Sci round tables, students in pharmacy, pre-medical, and pre-dental courses may discuss problems with professional men active in these fields. The club arranges visits to various centers of these professions.

Women's League

The Women's League supervises the social and general welfare of Junior College Women. Through its activities scores of loans have been made in the past to students, both men and women. The League, through its groups, keeps up a keen competition in scholarship and sports.

Clubs are organized in response to student needs and interests. Several clubs that were discontinued during the war because of lack of students, may be organized again this fall. Business Ad Club, Business Women's Club, Chess Club, and International Relations Club.

EXPENSES**I. Fees.**

Fees are due on the date of registration each semester. However, at present the Board of Education allows a partial payment plan. By this plan the student makes a cash payment of 50 per cent at the time of registration and files a note for the balance, payable not later than sixty (60) days from the beginning of the semester. Accounts not paid in 60 days are subject to a \$5.00 carrying charge.

A. Matriculation fee. A fee of \$5.00 is due from each student at his first enrollment only.

B. Tuition.

1. For full-time students (10 or more hours)
 - a. Students residing in Bay City: \$60.00 per semester.
 - b. Students whose legal residence is not in Bay City: \$85.00 per semester.
Non-residents who pay taxes on Bay City property may be allowed to apply part of the current school tax on this fee, not to exceed \$25.00 for any one semester.
2. For part-time students.
 - a. Residents: \$6.00 per credit hour for regular classes.
 - b. Non-residents: \$8.50 per credit hour.

Note Physical training counts as one credit hour in determining part-time fees.

3. Students electing more than the regular load. Students electing extra hours of work will be charged at the part-time rate for the hours in excess of eighteen.

4. Summer session.

For an eight-week summer session the tuition charge is \$48.00 for residents, and \$68.00 for non-residents for six or more credit hours. For less than six credit hours, the charges will be prorated.

5. Refund of Fees.

Students who, for some unexpected reason, are obliged to leave college within the first few weeks of the semester, may receive a refund of some portion of the tuition.

- Note Tuition payable by school districts, townships and counties.

General School Laws, Part II, Chapter XXI

Sec. 5. "School districts not maintaining a junior college are hereby authorized by a majority vote of all electors qualified to vote at any school election to pay the tuition cost, in whole or in part, for education of all junior college pupils residing in such district to the nearest school district maintaining a legally established junior college, and to provide transportation to and from said junior college for all junior college pupils residing in such district."

Sec. 6. "Any county and, or township by action of its governing body is hereby authorized to contribute annually not more than \$100.00 per resident pupil attending a collegiate institution to a school district maintaining such institution: PROVIDED, that whenever such contribution is made the fees charged by the said school district for collegiate instruction shall be uniform throughout the said county or township."

- C. **Activity fee:** \$5.00 each semester For short terms \$.50 per week. Part-time students \$.50 per credit hour.
- D. **Late registration fee:** Students registering after the regular days set for registration will be required to pay a late registration fee of \$2.00.
- E. **Graduation fee.** No additional fee is charged those who qualify for graduation.
- F. **Examination fee.** Students absent from examinations will be charged a fee of \$1.00 for each special mid-semester examination and \$2.00 for each special final examination.
- G. **Placement Examination fee.** Students taking the Placement examinations at any time other than on the dates set in the calendar will be charged a fee of \$5.00.

- H. **Laboratory and miscellaneous fees.** Certain fees are charged in laboratory, shop, and drawing courses as follows:

Accounting	\$ 1.00
Art	1.00
Architecture	1.50
Biology 1, 2, each	3.00
Chemistry 1, 2, 21, each	5.00
Chemistry 5	8.00
Chemistry 24	10.00
Drawing 1, 2, each	1.50
Drawing 3, 4, 23, each	1.00

Economics 35, 36, each	5.00
Geography 5, 6, each	1.00
Geology 1, 2, each	2.50
Physics 1, 2, 21, 22, each	3.00
Psychology 1, 21, each	1.00
Shop 1, 3, 4, each	2.00
Typing	2.00

- I. **Locker Rental fee.** A deposit of \$1.00 is required from each student, \$.50 of which is refunded at the end of the school year
- J. **Cap and Gown fee.** A small fee is required of each graduating student. The Cap and Gown fund is used to maintain and replace such equipment.
- K. **Change of Elections.** After the first week of classes, there is a charge of \$1.00 for each change of elections.

II. Instructional Materials.

- A. Textbooks and supplies may be purchased at reduced rates at the college bookstore. Books cost approximately \$20.00 a semester, the amount varying with the courses elected.
- B. Cash cards for the purpose of securing laboratory supplies and for paying for laboratory breakage may be purchased at \$2.00 each. Unused amounts are refunded on presentation of the card.

LOANS AND SCHOLARSHIPS

I. Loans.

A. Women's League Loan Fund.

A loan fund, available for men and women regularly enrolled in the college, has been maintained since 1928 by the Women's League.

II. Scholarships and Grants-in-aid.

A. For Students Attending Bay City Junior College.

Board of Education Scholarships.

In the spring of 1938 the Bay City Board of Education established six scholarships of fifty dollars each. These are awarded to graduates of high schools in the vicinity of Bay City and are applied to tuition, \$25.00 per semester. Each award may be continued for a second year if the holder's record during his freshman year merits such recognition.

The Dow Chemical Company Awards.

The Dow Chemical Company makes available the sum of three hundred dollars annually for award purposes. The general policy of the college is to grant one or more tuition scholarships annually and to reserve the remainder of the money for use as grants-in-aid. Grants-in-aid are given to students whose effort merits recognition and whose continuance in college depends upon some assistance.

The Industrial Brownhoist Corporation Awards.

A fund of one thousand dollars has been established this year by the Industrial Brownhoist Corporation for scholarships and grants-in-aid, to be awarded by our scholarship committee to worthy high school graduates of the Bay City area who wish to attend Bay City Junior College.

Rural Teacher Award.

The Bay County Council of Parents and Teachers established in 1948 an annual grant-in-aid of twenty-five dollars. It is to be awarded to a student living in rural Bay County who is preparing for rural teaching; one who "shows high educational promise and who needs financial assistance."

Women's League Scholarship.

Two scholarships of \$25.00 a semester for the sophomore year are awarded each year by the Women's League to outstanding freshman members.

Bay County Bar Auxiliary Scholarship.

This scholarship covers one year's tuition and necessary books, and is awarded to a Bay County resident on the basis of need, character, scholarship and general activity — pre-legal student in the sophomore year preferred.

Bay City Council of Parents and Teachers Scholarship.

As an encouragement for qualified young people to enter the teaching profession, the Bay City Council of Parents and Teachers will make an annual scholarship award to a second-year Pre-Education student.

George E. Butterfield Scholarship Fund.

This fund, established in June 1949 in honor of George E. Butterfield, who retired after serving as Dean of the Junior College for twenty-three years, provides four tuition scholarships annually of \$50.00 each. The scholarships are open to new or returning students.

Scholarships for Central High School Graduates.

For many years organizations in Bay City, some of them in Central High School, have awarded Junior College scholarships to high school graduates. Information regarding these scholarships may be obtained through the high school office.

B. For Junior College Graduates.**The University of Michigan Public Junior College Scholarships.**

In May, 1941, the Regents of the University of Michigan established a class of scholarships for the benefit of the graduates of Junior Colleges. The number of scholarships available depends upon the enrollment of the college — one scholarship for an enrollment of two hundred. Recommendation for the scholarship is made by a committee of the Junior College faculty.

Michigan State College Junior College Scholarships.

In February 1949 the State Board of Agriculture established a number of scholarships to be awarded to junior college graduates. One scholarship will be made available each year for every 200 students, or major fraction thereof, enrolled in each of the Michigan public junior colleges. The awards will be made for one year, covering tuition and fees, and may be renewed for a second year if the student establishes a high standard of scholarship.

State Board of Education Scholarship.

To encourage students to train for teaching in elementary schools, the State Board of Education grants Teachers College scholarships to a certain number of superior candidates. Graduates of Bay City Junior College who have a B average may apply

ENTRANCE REQUIREMENTS

REGULAR STUDENTS

A. Programs of Study complete in two years (Plan 2, page 3):

For applicants wishing to enter the General Academic curriculum, or any of the semi-professional programs in trades and business (see page 20), admission is granted to any high school graduate with a satisfactory record. There are no specific subject requirements other than are needed for high school graduation.

B. Programs of study for transfer to senior colleges (Plans 1 and 3):

Applicants wishing to enroll as regular students in one of the affiliation programs (see page 22f), for later transfer to a senior college, must be graduates of accredited high schools, with an average of C or better in academic subjects. They should satisfy the entrance requirements for the corresponding curriculum in the university or college which they plan to attend. In this respect, high school students in various college preparatory programs should give special attention to college requirements in foreign languages, mathematics, and the sciences. For the usual requirements in mathematics, see page 50.

The Bay City Junior College has agreed to admit students under the Michigan High School College Agreement plan: "The college agrees to disregard the pattern of subjects pursued in considering for admission the graduates of selected accredited high schools provided they are recommended by the school from among the more able students in the graduating class. This agreement does not imply that students must be admitted to certain college courses or curricula for which they cannot give evidence of adequate preparation."

Admission with deficiencies.

Students otherwise eligible for an affiliation curriculum, but who are deficient in one or two of the required academic units, may enter conditionally. The deficiencies should be removed before the beginning of the second year of work. This may be done by taking the proper courses in Junior College or in Central High School, without college credit.

NOTE: Students from non-accredited high schools, students lacking more than two required units, and those whose academic average is below C, will be required to enroll in a two-year curriculum for one or more semesters. Transfer of such a student to the affiliation curriculum of his choice will depend on the removal of subject deficiencies, if any and on making a satisfactory academic record.

SPECIAL STUDENTS (Plan 4)

Adults who cannot satisfy the regular entrance requirements but who show that they are qualified to pursue the studies desired, may be admitted as special students.

PART TIME STUDENTS

Students who, for satisfactory reasons, wish to elect less than eleven hours of work, may enter as part-time students. Such students cannot be unqualifiedly recommended for trans-

fer to other institutions until they have carried regular work for at least one semester.

HEALTH REPORT

Every new student is required to have a health examination. This may be given by his family physician, the report being made on the Bay City Junior College health examination blank. Members of the Bay County Medical Society have agreed to give the examination for a fee not to exceed \$2.00. The examination will be waived only for certain part-time and special students.

APPLICATION FOR ADMISSION

The student must forward, either through the high school office or direct to the Junior College office:

1. the Application for Admission,
2. the Health Report, and
3. his Photograph.
4. Veterans of World War II a photostatic copy of discharge papers.

The high school principal or the superintendent must forward direct to our office the Transcript of Credits and Certificate of Recommendation form.

Note: The necessary blanks may be obtained through your high school office, or they will be sent direct from our office on request.

Students are urged, as far as possible, to file their applications during their last semester in high school, or soon after graduation. On receipt of the application and transcript, a "report" will be mailed to the student.

Advanced Standing.

Students entering with credits from another college are asked to file the regular application for admission, the health report, and the photograph. An official transcript of credits sent direct from the college will usually take the place of the high school transcript and recommendation.

REGISTRATION PROCEDURE

For registration dates see the calendar. New students whose applications have been accepted prior to registration time, and returning students, will be notified by mail when to report.

All students should complete registration before classes start if at all possible. Those entering after the scheduled registration period are charged a Late Registration fee of \$2.00. Beginning with the first meeting of the class, attendance is carefully recorded.

1. Placement examinations for all new students.
A battery of tests will be given in advance of formal registration in order to furnish the advisers with information about the student's abilities and needs. A fee of \$5.00 is charged if these tests are not taken at the time scheduled.
2. Registration will start in the college office where the student will be given an instruction sheet and a schedule of classes.
3. Faculty advisers will confer with the students and supervise the filling out of the necessary forms.

4. Elections.

The particular courses that a student should elect depend on the requirements of the curriculum in which he enrolls or on the special requirements of the institution to which he expects to have his credits later transferred.

5. Fees are payable as soon as the adviser has approved the student's elections. If the Partial Payment plan is to be used, complete arrangements should be made at this time.

INSTRUCTIONS TO FRESHMEN

1. Physical Training and English, two semesters each, are required of all freshmen.

2. Many colleges limit the courses open to freshmen. This should be taken into account in the freshman's plans. Courses numbered 21 or over are not open to freshmen without special permission.

3. Courses taken by freshmen in the first semester should be continued through the second semester, unless the curriculum requirements call for a change.

4. No course which is a repetition of a unit accepted for entrance credit may be taken in college for transfer credit.

INSTRUCTIONS TO FRESHMEN AND SOPHOMORES

1. EXTRA HOURS, that is, more credit hours than are called for in the particular curriculum, may be elected only by specific approval of the curriculum adviser. Extra hours are seldom allowed a student in his first semester of residence.

2. CHANGE IN ELECTIONS. Written requests for change in elections, approved by the adviser, the instructor and the Dean, must be filed with the Recorder. **No change should be made until final approval has been given.** Except in cases of ill health, overload, or other excellent cause, subjects dropped will be recorded as failures.

3. WITHDRAWALS FROM COLLEGE. Any student wishing to withdraw before the end of a semester should explain conditions to the Dean and ask for honorable dismissal. A "clearance certificate" must be completely processed and filed with the Bursar. **The student should continue to attend all classes until he has obtained "honorable dismissal."**

4. TRANSFER OF CREDIT. Recommendations in connection with transfer of credit will be granted or withheld on the basis of the student's complete scholastic record, in the light of the requirements of the school to which the transfer is requested, and of his possession of the personal qualities requisite for success in college.

GRADUATION REQUIREMENTS

a. Graduation from Bay City Junior College means that the student has completed two years of college work in accordance with the special requirements of the curriculum in which he has enrolled.

b. Students completing sixty hours of credit are granted a Certificate of Graduation. Those who have earned, also, sixty or more honor points in accordance with the requirements are granted, upon recommendation of the Dean and the superintendent of schools, a certificate with the title of Associate in Arts or Associate in Science.

c. A student in an affiliation curriculum may, if he has sufficiently high scholastic average, be graduated with less than sixty hours of credit, but in no case with less than 56.

d. All candidates for graduation must have completed two courses in English and two in Physical Training (unless officially excused by faculty action) A State law requires Political Science A or its equivalent.

e. Students who have made a high percentage of honor points are granted, besides a title, the added distinction of graduating "With High Honor" or "With Honor" which is included on their diplomas.

f. The candidate must have been in residence at this or another institution of collegiate rank for the equivalent of at least four semesters; he must have been in residence at this college for a regular program of work for at least the last semester of his junior college study (Exceptions to these requirements may be made, especially for veterans.)

PROGRAMS OF STUDY

The programs of study are divided into two main groups:

I. Two-year Vocational and Cultural Curricula.

Accounting, General Academic, Semi-Professional work in Engineering and in Architectural and Industrial Drafting, Secretarial Studies, Small-Business Management, and Retailing.

These are for students who plan to complete their formal education in Junior College. The vocational programs prepare the student for direct entrance into the industrial and business world at the semi-professional level.

Cooperative Vocational Training may be combined with any of the vocational programs. It is open to those students who are partially trained in required skills. The cooperative student spends half the time in college and half on-the-job. The course normally follows the first year of college work, but the freshman who enters with marketable skills may enroll by special permission.

Because cooperative vocational office training requires two hours of school time, and the student must work afternoons, graduation from Junior College may require longer than the usual four semesters.

II. Affiliation Curricula.

These are planned to enable the student to transfer to senior colleges and technical schools with little or no loss of time.

They include:

County Normal, for teaching in rural schools.

Engineering

Liberal Arts

Pre-professional: agriculture, architecture and design, business administration, conservation, dentistry, dietetics, forestry, home economics, journalism, law, medical technology, medicine, nursing, pharmacy (one year), teaching, and others.

The division of the programs into the two groups is a matter of convenience. Students completing work in the first group with a good record often decide to continue their studies and are granted transfer credit for much of their Junior College work even though it was not planned for that purpose. On the other hand, a large part of the studies in the second group have immediate vocational value if the student finds that he cannot continue beyond Junior College.

PROGRAMS OUTLINED

The following programs are suggested. Changes should be made only with the approval of the adviser.

1. CURRICULA TO BE COMPLETED IN ONE OR TWO YEARS OF COLLEGE STUDY

1. BUSINESS

Certain courses in economics and business may be offered in alternate years. Each course will thus be available to all two-year students, although the order of presentation will vary from year to year.

Two-Year Programs

a. Accounting Curriculum

Accounting (See Note 1).....	14 hours
Economics 1 and 2.....	6 "
Economics 5, Business Organization.....	3 "
Economics 29, Business Statistics.....	3 "
Economics 39, Corporate Finance.....	3 "
Economics 40, Public Finance and Taxation.....	3 "
English 1 and 2.....	6 "
Mathematics 30.....	3 "
Physical Training 1 and 2.....	
Typewriting 1 (None 2).....	2 "
Electives cooperative vocational training, economics business and related subjects (Note 2).....	17 "

b. Small Business Management

Accounting 1 and 2 (Note 1).....	6 hours
Economics 1 and 2.....	6 "
Economics 4, Economic History.....	3 "
Economics 5, Business Organization.....	3 "
Economics 7, Business Communication.....	3 "
Economics 26, Marketing.....	3 "
Economics 29, Business Statistics.....	3 "
Economics 31, Business Law.....	3 "
Economics 33, Salesmanship.....	3 "
Economics 37, Records Management.....	3 "
English 1 and 2.....	6 "
Mathematics 30, Business Computation.....	3 "
Physical Training 1 and 2.....	
Speech 25, Practical Speech.....	3 "
Typewriting 1 (Note 1).....	2 "
Electives cooperative vocational training, economics, business and related subjects (Note 2).....	10 "

c. Secretarial Curriculum

This course is designed to equip the student to fill those promotional positions beyond the entering stenographic, typist, and clerical wedges and to meet the reporting needs of those planning to do work in the journalism field.

Accounting 1 (Note 1).....	3 hours
Economics 1 and 2.....	6 "
Economics 5, Business Organization.....	3 "
Economics 7 Business Communications.....	3 "
Economics 35, Machine Calculation.....	3 "
Economics 37, Records Management.....	3 "

English 1 and 2.....	6	"
Secretarial Techniques.....	3	"
Shorthand (Note 1).....	16	"
Typing.....	6	"
Electives: cooperative vocational training, economics, business and related subjects (Note 2).....	8	"

Those planning to work at Dow Chemical Company or similar industrial organizations should plan to take some chemistry.

NOTE 1: Students who have satisfactory high school credit in bookkeeping, shorthand and typewriting will be excused from the corresponding equivalents in Junior College. Additional electives will thus be available.

NOTE 2: Liberal Arts subjects related to the type of business the student expects to follow may be substituted for some of the economics and business electives, subject to the adviser's approval.

d. Retailing

A two-year cooperative retailing program is being organized.

One-Year Programs

Open to specially recommended graduates of a high school commercial course who do not find it feasible to plan for the regular two-year program.

a. Accounting

Advanced Accounting.....	8	hours
Economics 1 and 2.....	6	"
English 1 and 2.....	6	"
Physical Training 1 and 2.....		
Electives, including cooperative vocational training.....	10	"

b. Secretarial Studies

Economics 1 and 2.....	6	hours
English 1 and 2.....	6	"
Advanced Dictation.....	8	"
Advanced Typewriting.....	4	"
Physical Training, two semesters.....		
Electives, including cooperative vocational training.....	6	"

2. INDUSTRIAL CURRICULUMS

a. Architectural Drafting

This program is designed to meet a practical need for those preparing to take jobs in architectural offices, and is indispensable for those going into a building trade or designing their own home.

Architecture 1, 2, 3	English 1, 2E
Art 1, 2, 5, 13	Mathematics 2, 9.
Chemistry A	Physical Training 1, 2
Economics 1	Speech 1, 2
Electives (may include Cooperative Industrial Training)	

b. Engineering Drafting

Drawing 1, 2, 3, 4	Physical Training 1, 2
Economics 1	Physics A
English 1. 2E	Shop Practice 4
Mathematics 2, 9	Speech 1, 2
Electives (may include Cooperative Industrial Training)	

c. Semi-Professional Engineering

This curriculum is for the young man who wishes to further prepare himself beyond high school along various mechanical lines. It is also an excellent preparation for shop foreman or superintendent.

Chemistry A, 6

Drawing 1

Economics 1, 2, 27

English 1, 2E

Mathematics A, B, 1, 2

Physical Training 1, 2

Physics A

Shop Practice 4

Speech 1, 2

Electives (may include Cooperative Industrial Training) Additional credits in Auto Mechanics, Machine Shop, Welding, and Wood Shop should be arranged for special occupations in industry

Note: In the above industrial programs, if the student has had in high school the equivalent of a given course, he should elect an advanced course in that field or some other subject approved by his adviser.

3. General Academic Curriculum

This curriculum is planned for students who expect to complete their formal education at the junior college level but who have general culture rather than a vocation as their aim. Not planned for transfer credit, the curriculum allows the well qualified student a broader field of electives than is possible in the liberal arts curriculum.

It is also for the student not qualified for admission to an affiliated curriculum, either because of scholastic or subject deficiencies, while continuing his general education. When he has removed the deficiencies, he may transfer to an affiliated or semi-professional curriculum.

In general, the student in this curriculum will be expected to distribute his elections in the various fields of study as outlined in the liberal arts curriculum: language, literature and fine arts, mathematics and science, history and social studies.

II. AFFILIATION CURRICULA.**BAY COUNTY NORMAL SCHOOL CURRICULA**

These programs afford the graduate the opportunity for immediate employment in the rural schools of the state, and at the same time provide complete transfer credit on a four-year program at the state teachers colleges.

FULL-TUITION SCHOLARSHIPS are granted students who are accepted for the teacher-training (second) year on condition that the recipient, following graduation, will teach at least one year in a rural school in Michigan. Graduates receive the County Limited Teacher's certificate.

a. County Normal Program.

Education 21, 22, 23, 24, 25.....	16 hours
English 1 and 2.....	6 "
Geography 5 or Geology 1.....	4 "
History (American) or Political Science.....	3 or 4 "
Mathematics 30 (Arithmetic).....	3 "
Music 1.....	2 "
Penmanship (at training school).....	credit
Physical Training (each semester).....	credit
Physiology and Hygiene 1 or 2.....	4 hours
Electives to meet graduation requirements.	

b. State Limited Certificate Program.

Combined Curriculum with Central Michigan College of Education. Approved by the State Board of Education.

A student completing the work outlined in the two institutions, with a better grade than C, will receive the State Limited Certificate. At least six weeks of residence at Central Michigan College are required. The involved courses and instructors at Bay City Junior College are approved by C. M. C. E. officials.

At Bay City Junior College:

Art	3 hours
Education 21, 22, 23, 24, 25.....	16 "
English 1 and 2.....	6 "
Geography 5 or Geology 1.....	4 "
History 23 or 24.....	3 "
Mathematics 30 (Arithmetic).....	3 "
Music 1.....	2 "
Penmanship (at training school).....	credit
Physical Training (each semester).....	credit
Physiology and Hygiene 1 or 2.....	4 hours
Political Science 1 or 2.....	4 "
Sociology 21 or 22 (including rural problems).....	3 "
Electives to meet graduation requirements.	

At Central Michigan College of Education:

Agriculture 101 (or approved substitute)

English 204 (Children's Literature)

If the student has Junior College credit in Children's Literature, an elective will replace English 204.

The summer work is to be taken after graduation from Junior College, and should be completed not later than the second summer.

ENGINEERING

The entering engineering student should present high school credits in chemistry and physics, and in mathematics through solid geometry and trigonometry. If he is deficient in any of these subjects, the student should plan a modified program with his adviser.

University of Michigan**First Year**

First Semester		Second Semester	
Chemistry 5.....	5 hours	Chemistry 6.....	3 hours
Drawing 1.....	3 hours	Drawing 2.....	3 hours
English 1.....	3 hours	English 2E.....	2 hours
Mathematics 5*.....	4 hours	Mathematics 6*.....	4 hours
Physical Training 1		Physical Training 2	
Speech 1.....	1 hour	Speech 2.....	2 hours
		Elective or Shop 4	

Second Year

First Semester		Second Semester	
Drawing 23.....	2 hours	Economics 24.....	3 hours
Economics 23.....	3 hours	Mathematics 28.....	4 hours
Mathematics 27.....	4 hours	Physics 22.....	5 hours
Physics 21.....	5 hours	Physics 24.....	3 hours
Electives**.....	2-4 hours	Electives**.....	2-3 hours

*Students lacking Trigonometry as an entrance credit will substitute Mathematics 7 and 8 for Mathematics 5 and 6 respectively.

**His contemplated field of engineering and the requirements of the institution where the student expects to continue will be considered in advising these elections. Such possible electives include Astronomy, English, Geology, Shop 4 or some other non-technical subjects. Further adjustment of the curriculum may on occasion, be advised.

Michigan State College

Credits for Basic courses Nos. 1, 2, 4, 6, and 5 or 7 are required (see next page) in the four-year program. To partially meet these requirements in Junior College, electives may replace Drawing 23, Economics 24, Physics 24, and Speech 2 in the preceding program.

Shop 4 should be included for agricultural, electrical, and mechanical engineering.

Michigan College of Mining and Technology

A program similar to that for the University of Michigan is acceptable.

LIBERAL ARTS

The Liberal Arts curriculum is intended for students desiring a literary or scientific education without reference to any of the professions mentioned in the other curricula. In most colleges and universities the student is expected to get a broad education in the first two years, and to specialize somewhat in the last two years of his degree course. The requirements of the College of Literature, Science, and the Arts of the University of Michigan are typical:

In order to be admitted to concentration as a junior at the University, a student must have completed successfully sixty hours of work. Forty of these hours must be selected from five "Distribution Groups"

1. English composition,
2. Mathematics or philosophy,
3. Humanities:
 - a. Foreign language
 - b. Literature and fine arts
4. Social sciences,
5. Natural sciences.

The forty hours must include:

English composition.....six hours

Social sciences.....eight hours

Natural sciences.....eight hours and

Foreign language.....completion of the language requirement.

See pages 25 and 26 in the University bulletin.)

While in Junior College, the student should also take courses that are prerequisites for the field of concentration he plans to enter in the junior year.

Basic College in Michigan State College

At Michigan State College each student, in all degree programs, is expected to complete nine term hours (six semester hours) in at least five of seven Basic Courses.

For students transferring from Bay City Junior College, Michigan State College will accept as substitutes for the Basic courses credits, of C grade or better, in related subjects. It is important that students expecting to transfer to Michigan State College elect their subjects with this in mind.

The Basic courses and acceptable substitutes are:

1. Written and Spoken English.

English 1 and 2 (or 2E)

One course in Speech (Engineers, Speech 1, others, Speech 21 or 25)

2. Biological Science.

Two courses from Biology 1, 2, Physiology 1

3. Physical Science.

Two courses in separate fields.

Astronomy, Chemistry, Geology, Mathematics (Course 2 or 3, or a higher course), Physics.

4. Social Science.

Two courses in separate fields.

Economics 1 or 23, 3, 4, Geography History 23, 24, Political Science, Sociology

5. Effective Living.

Two courses in separate fields.

Physiology and Hygiene 2, Psychology 21, Sociology (Psychology 21 and Sociology 21 preferred.)

6. History of Civilization.

History 5, 6.

7. Literature and Fine Arts.

Art 5, English 23.

PRE-PROFESSIONAL CURRICULA

The first two years of preparation for most professions are mainly in the Liberal Arts subjects. The student should elect subjects to meet the usual group requirements. At the same time he should select subjects that will prepare him for advanced work in the specialized fields required in the particular profession. The programs outlined in the following pages are suggestive only.

They should be modified to meet the particular needs of the student and the requirements of the senior institution to which he expects to transfer. It is important that the student study carefully the bulletins of the senior colleges in making his decisions.

AGRICULTURE**Michigan State College**

Credits for Basic courses: Nos. 1, 4, 5, and either 6 or 7

Biology 1, 2

Chemistry 5 (or 1, 2) 22

Mathematics 1 or 3

Electives from: Accounting, Drawing, Geology, Physics, Shop Practice, or other subjects indicated in special agricultural programs (see M. S. C. bulletin)

For Farm Engineering include:

Drawing 1, 2

Mathematics 2

Physics 1, 2

Physical Training 1, 2

For Agricultural Engineering, see Engineering.

ARCHITECTURE AND DESIGN**University of Michigan**

For Architecture, Interior Design and Product Design

Architecture 1, 2

Art 11, 12, 13

Economics 23, 24

English 1, 2E, 23

History 5, 6

Mathematics 5, 6, 27

Physical Training 1, 2

Physics 1, 2, 24

Speech 1

Electives

**For Design of Information Mediums, Drawing and Painting,
and for Teaching Art in high school**

Architecture 1, 2	History 5, 6
Art 11, 12, 13	Speech 1
English 1, 2, 23	Electives (see Art instructor)

For General Design

Art 11, 12, 13	Speech 21
English 1, 2, 23	Electives (see Art instructor)

BUSINESS ADMINISTRATION

University of Michigan

Accounting 21, 22	8 hours
Economics 21, 22	6 "
English 1 and 2	6 "
Languages, Literature, Speech	12 "
Mathematics and Physical Sciences (inc. Math. 3)	12 "
Physical Training 1, 2	
Social Studies	6 "
Electives to meet the requirements for graduation.	

Michigan State College

Credits for five Basic Courses including: Nos. 1, 2, 4 or 5, 6 or 7

Accounting 21, 22	
Economics 21, 22, 29	Mathematics 1, 2, 3
Geography 3, 6	Physical Training 1, 2

CHEMISTRY

Major

University of Michigan

Chemistry 1, 2, 21, 22, 24	18 hours
English 1, 2	6 "
French 1, 2 or German 1, 2	8 "
Mathematics 5, 6	8 "
Physical Training 1, 2	
Physics 1, 2	8 "
History and Social Studies	4 or more hours

Michigan State College

Credits for four of the five required Basic courses: Nos. 1, 2, 4 or 5, 6 or 7 (One basic may be taken in the Junior year.)

Chemistry 5 (or 1,2), 21, 22, 24	
German 1, 2	Physical Training 1, 2
Mathematics 5, 6 or 7, 8	Physics 21, 22

DENTISTRY

Biology 1, 2	8 hours
Chemistry 1, 2, 22	12 "
English 1, 2	6 "
Physical Training 1, 2	
Physics 1, 2	8 "
Electives to meet requirements for graduation.	

DENTAL HYGIENE

University of Michigan

Sixty hours of Liberal Arts, meeting the requirements listed on page 27 of this bulletin, including Psychology 21 and Sociology 21.

DIETETICS

See Home Economics

EDUCATION

The first two years of the teacher-training programs in Michigan Colleges of Education are essentially Liberal Arts programs. Although the credits earned in the County Normal curriculum are accepted in transfer to the teachers colleges, it is recommended that the courses in education be taken in the last two years if the student does not intend to teach before completing the four-year course. Pre-Education students will be referred to Liberal Arts advisers. In selecting the courses, attention should be given to group requirements and to courses introductory to the fields of study in which the individual expects to teach. For admission to the School of Education at the University of Michigan, Psychology 21 and Speech 21 are recommended subjects in the sophomore year.

For teaching Art in secondary schools, see also the Drawing and Painting program under Architecture and Design on page 29.

FORESTRY AND CONSERVATION**University of Michigan****FOREST PRODUCTION**

Biology 1, 2
Chemistry 1 or 5
Drawing 1
Economics 23
English 1, 2
Geology 1, 2
Mathematics 2, 3 (or 5)
Physical Training 1, 2
Physics 1
Electives

WOOD TECHNOLOGY

Accounting 21 (and 22 or a social science elective)
Art 11
Chemistry 1, 2, 6
Drawing 1, 2
Economics 23 (24 or other social science)
English 1, 2
Mathematics 5, 6a
Physical Training 1, 2
Physics 1, 2, or 21, 22
Speech 21
Electives

Michigan State College

Forest Production, Wood Utilization and Technology
Credits for Basic courses: Nos. 1, 3 (including Physics A or 1), 4, 5, 6 or 7
Biology 1, 2
Chemistry 5 (or 1, 2), 22
Drawing 1
Geology 1
Mathematics 2, 3
Physical Training 1, 2
Electives

HOME ECONOMICS**Michigan State College**

Credits for Basic courses Nos. 1, 2 (including Physiology 1), 5, 6 or 7
 Chemistry 5, 22
 Economics 23, 24
 Physical Training 1, 2
 Physics 1, 2
 Psychology 21
 Sociology 21
 Electives

JOURNALISM**University of Michigan**

Economics 21, 22, or 23, 24
 English 1, 2, 21, 22, 23, 24
 Foreign Language, eight or more hours
 History 5, 6
 Science, eight hours
 Physical Training 1, 2
 Political Science 1, 2
 Sociology 21, 22

Michigan State College

Credits for Basic courses: Nos. 1, 2, 4, 6, 7
 English 21, 22, 23, 24
 Foreign Language 1, 2, 3, 4
 Physical Training 1, 2
 Political Science 1, 2

LAW

English 1, 2, 23, 24.....	12	hours
Economics 23, 24.....	6	"
Foreign Language, Latin is strongly recommended.....	8	"
History 5, 6, 23, 24.....	14	"
Science	8	"
Physical Training 1, 2		
Political Science 1, 2.....	8	"
Elective		

MEDICAL TECHNOLOGY**University of Michigan**

Biology 1
 Chemistry 1, 2, 21, 22
 English 1, 2
 Foreign Language 1, 2
 Mathematics 1, 2, or 2, 3
 Physical Training 1, 2
 Physics 1
 Social Studies, 1 year
 Electives to meet Groups requirements.

Michigan State College

Credits for Basic courses: Nos. 1, 3 (including Physics 1), 4 or 5, 6
 or 7
 Biology 1, 2
 Chemistry 5 (or 1, 2), 22
 Physical Training 1, 2
 Electives

Mercy Hospital Dr. Gamble

Biology 1, 2	Mathematics 1, 2
Chemistry 1, 2, 21, 22	Physical Training 1, 2
English 1, 2	Physics 1, 2
Electives	

Quantitative Analysis, not offered here, may be required. In such case it could be taken in some other college in the summer.

MEDICINE**University of Michigan**

Biology 1, 2	8 hours
Chemistry 1, 2, 21, 22, 24	18 "
English 1, 2	6 "
Foreign Language	8 "
Physical Training 1, 2	
Physics 1, 2	8 "
Electives to meet Distribution Group requirements, page 27	

MORTUARY SCIENCE**Wayne University**

The first two years of a three-year program.

Biology 1	Mathematics 30
Chemistry 1, 2, 22	Physical Training 1, 2
Economics 1, 2	Psychology 1
English 1, 2	Sociology 21

Electives to total sixty hours. Recommended electives: Accounting, Economics 5 and other business courses, Speech 25.

NURSING**University of Michigan**

Biology 1	4 hours
Chemistry 1, 2	8 "
English 1, 2	6 "
Foreign Language (if less than two units in high school)	8 "
Physical Training 1, 2	
Electives from the following: Biology 2; Chemistry 21, 22, 24; English 23, 24; History; Physics; Political Science; Psychology; Sociology; Speech.	

Michigan State College

Credits for Basic courses: Nos. 1' and 6 or 7	
Biology 1	Physiology 1
Chemistry 5 (or 1, 2), 22	Psychology 21
Economics 23, 24	Sociology 21
Physical Training 1, 2	Electives

PHARMACY**University of Michigan**

The Michigan Board of Pharmacy allows only one year of advanced credit from a non-pharmacy college. However, a student who presents additional transfer credits will not be required to repeat courses.

Biology 1, 2	8 hours
Chemistry 1, 2	8 "
English 1, 2	6 "
Mathematics 2	2 "
Physical Training 1, 2	"
Electives from: Economics 23, 24; French; German; or Physics.	

POLICE ADMINISTRATION**Michigan State College**

Credits for Basic courses: Nos. 1, 2, 4, 6.

Chemistry 5 (or 1, 2), 22.

Economics 23, 24

Psychology 21

Physical Training 1, 2

Sociology 21

Electives from: Accounting, Chemistry, Foreign Language, Geography, History, Literature, Machine Shop, Mathematics, Physics, Political Science, Speech.

PUBLIC ADMINISTRATION**Michigan State College**

Credits for Basic courses: Nos. 1, 2, and two from 3, 5, 6 and 7

Accounting 21, 22

Economics 21, 22, 29

Psychology 21

Mathematics 1

Sociology 21

Physical Training 1, 2

Speech 21

Political Science 1, 2

Electives

SOCIAL SERVICE**University of Michigan**

Economics 21, 22

Psychology 21

English 1, 2

Sociology 21, 22

Physical Training 1, 2

Speech 21

Electives to complete requirements for graduation. Care should be taken to meet the Distribution Group requirements, page 27

Michigan State College

Credits for Basic courses: Nos. 1, 2, 6, 7

Economics 23, 24, 29

Foreign Language or credit for No. 3 Basic

Mathematics 1

Physical Training 1, 2

Political Science 1, 2

Psychology 21

Sociology 21, 22

Electives

AIR TRANSPORTATION

Many opportunities are open in the expanding industry of Air Transportation for both men and women. Advisers in Bay City Junior College can provide information regarding the various lines of work for which a student may prepare, and will assist in planning a suitable preparatory program of studies. Fields of opportunity include: accounting and finance, communications, engineering, general office work, flight dispatching, maintenance, meteorologist, personnel, pilot, purchasing, reservations, stewardess, supply, traffic.

VETERINARY MEDICINE**Michigan State College — Pre-Veterinary Year**

Credits for Basic courses Nos. 1, 4 or 5, 6 or 7

Biology 1, 2

Chemistry 5 (or 1, 2), 22

Physical Training 1, 2



Engineering — Drafting

COURSES OF INSTRUCTION

The courses in any subject bearing numbers above 20 are not open to freshmen without special permission.

The college reserves the right not to offer a course unless there is a reasonable number wishing to elect it.

ACCOUNTING

Part credit for graduation may be earned under the subtitles of 1a, 1b, 1c, etc., each representing one hour of credit. For transfer purpose the entire course is considered the unit.

1. Accounting Principles (1)

This course is a study of the fundamental principles of accounting. The subject matter includes debit and credit, classification of accounts, underlying principles of the various accounting records, controlling accounts, books of original entry (including special journals) and ledgers, statements and closing procedure. Laboratory work in the form of problems and sets will be provided. Five hours in class per week.

Three hours credit.

Each Semester.

2. Accounting Principles (2)

Prerequisite Course 1 or one year of bookkeeping in high school. This course is a continuation of the first course but in cases where the same subjects are studied the analysis is carried into greater detail. The subject matter includes: Records and accounts peculiar to a corporation, elements of manufacturing accounts, valuation of assets and liabilities in balance sheet, nature of reserves and surplus. accounting for sinking funds, problems relating to profit and loss statements, branch store accounting and cash journal arrangements. Ample problems and practice sets will be provided. Five hours in class per week.

Three hours credit

Each Semester.

5. Auditing Theory and Procedure

Prerequisite: Course 2 or two years of bookkeeping in high school.

The principles and procedure with reference to auditing will be studied, giving special attention to the balance sheet audit, the detailed audit, and special investigations. Sufficient practice work is provided, including theory problems, auditing problems, an audit case, and two audit projects. Questions and problems selected from CPA and AIA examinations. Five hours in class per week.

Three hours credit.

Each semester.

6. Federal Tax Accounting.

Prerequisite Course 2.

A study of Federal taxation including income tax, capital stock tax, excess profits tax, estate tax, gift tax, and excise taxes. Sufficient questions, problems, and reports are provided for a complete interpretation of Federal tax laws. Five hours in class per week.

Three hours credit.

Each Semester.

7 Social Security and Payroll Accounting.

Prerequisite: Course 2.

A study of Federal Social Security laws and State Unemployment Compensation laws. Questions, problems, and reports sufficient for interpretation and application of these laws to business are provided. Special attention to payroll records necessary to provide information for Federal and State returns. Three hours in class per week.

Two hours credit.**Each Semester.****8. Cost Accounting.**

Prerequisite: Course 2.

Cost accounting is studied in its relation to factory accounting. Its purpose is to classify in detail cost of production. It discloses inefficiency and indicates the profit or loss on each kind of goods or job. A study is made of departmental process, sequential and job costs, cost records, procedure, reports, and distribution of burden. Ample practice in these CPA problems is provided, together with a cost project. Five hours in class per week.

Four hours credit.**Each Semester.****21. Principles of Accounting 1.**

This course presents the underlying concepts and relationships in terms of the basic statement and a complementary scheme of skeleton accounts. It deals with the accounting procedure, with emphasis on periodic summarizing, and concludes with the preparation of simple statements from the records. Five hours in class per week. Text: Paton.

Four hours credit.**First Semester.****22. Principles of Accounting 2.**

Prerequisite Course 21.

This course emphasizes problems of credit, valuation, and income measurement in connection with cash, current receivables, merchandise, manufacturing accounts and fixed assets. The work sheet, partnership accounts and problems, accounting peculiar to the corporate form of organization and an analysis and interpretation of financial statements are the principal topics considered. Five hours in class per week. Text: Paton.

Four hours credit.**Second Semester.****ARCHITECTURE****1. Architectural Projections (U. of M. A. 1)**

Prerequisite: Must be preceded or accompanied by Mathematics 9 or its equivalent.

Simple projection as applied to plans, sections, and elevations; intersections and developments.

Two hours credit.**2. Graphics. (U. of M., A. 2)**

Prerequisite: Architecture 1 or equivalent.

Architectural perspective and shades and shadows.

Two hours credit.**3. Home Planning.**

Prerequisites: Architecture 1 and Mathematics 9.

This course will deal with small home planning: costs, location, elevations, typical roofs, walls and foundations. Examinations will be made of available building materials. Time permitting, a scale model of a typical small home will be made by each student.

Three hours credit.

ART**1 Elementary Art.**

A beginning course in art designed for all students interested in experimentation and creative expression in the various art mediums, materials and color. An orientation course aimed to furnish a broad and basic background.

Three hours credit. Each Semester.

2. Sketching and Composition.

Prerequisite Art 1 or its equivalent.

This course aims to give the student further composition understanding, and to develop creative ability in sketching of all types. Problems using all media.

Three hours credit. Each Semester.

5. History of Western Art.

A general survey of the history of Western Art from periods of the Greeks to modern times, dealing with outstanding masterpieces and representative artists selected for presentation to illustrate high points of artistic expression in these main periods: classical Greece, Gothic, Renaissance, baroque, classicism, romanticism, impressionism, and modern abstract art.

Three hours credit.

11. Introductory Art (U. of M. Drawing 21)

The fundamentals of representation studied through the drawing of simple forms in line and tone. Creative as well as correct drawing. Six hours of class work per week.

Two hours credit. Each Semester.

12. Introductory Art (U. of M. Drawing 22)

Prerequisite: Art 11.

The representation of form, with emphasis on values and textures, with some study of elementary composition. Six hours of class work per week.

Two hours credit.

13. Introduction to Design (U. of M. Design 1)

The study of design elements: line, form, tone, color and texture, experienced through simple materials. Emphasis on understanding and imagination.

Four hours credit.

23. Art Education (Elementary Grades)

Prerequisite: Advise Art 1 or its equivalent.

A course designed for County Normal students and other prospective teachers. Introduction to art teaching in our present social order. Development of the ability to stimulate the interest of children, and to understand the art merit of this expression. Experimentation in materials and mediums of their grade level.

Three hours credit. Each Semester.

24. Art Education (Intermediate Grades)

Prerequisite Art 1 or its equivalent.

This course is designed as above but for intermediate grades.

Three hours credit. Each Semester.

25. Commercial Design and Illustration.

Prerequisite: Art 2.

Experimentation and study of the relation of commercial design and illustration in commerce as it affects society today Lay-outs, lettering, poster designing, creative illustration, and air brush work.

Three hours credit. Each Semester.

26. Advanced Design.

Prerequisite: Art 2.

Creative application of design principles in the field of crafts or commercial art. Also stage and window set designing. Individual expression stressed.

Three hours credit. Each Semester.

27 Figure Sketching and Portrait.

Prerequisite: Art 2.

Rapid sketching of the figure for action and proportion. Work in costume designing. Also clay modeling of figure compositions. Portrait work in charcoal, water color, oil and various mediums.

Three hours credit. Each Semester.

Note: In Art courses two or three hours of class work per week are required for each credit hour.

ASTRONOMY

The courses in astronomy are non-mathematical, introductory courses. Evening meetings at the observatory are arranged occasionally for observations. Lantern illustrations and films are used frequently and oral and informal discussions follow work done in the classroom and laboratory Three class periods, one laboratory period per week.

11. Descriptive Astronomy.

The solar system. This course deals with the fundamental facts concerning the solar system and its members and includes discussions of the methods and principles involved.

Four hours credit. First Semester.

12. Descriptive Astronomy.

The sidereal system. This course deals with the leading facts concerning the stars and nebulae, and includes discussions of the methods and principles involved. The application of elementary astronomical principles is emphasized.

Four hours credit. Second Semester.

BIOLOGY**1. Zoology.**

Principles of Animal Biology The course aims to build up in the minds of students the fundamental conceptions underlying all life phenomena. The structure, classification, physiology, environmental relations, and the origin and development of animals are studied. Illustrations and application of the scientific method are made. The course is basic training for certain special fields as pre-medicine, pre-dentistry, pre-nursing, pre-forestry, and physical education. Should be preceded by high school biology Two hours of lecture and recitations and six hours of laboratory work per week.

Four hours credit. First Semester.

2. Botany.

Elements of Botany The course deals with the structure and physiology of seed plants; but all groups of plants are studied in their place in the evolution of the plant kingdom. Special emphasis is placed on the study of bacteria in their relation to health and industries and to the economic importance of other plants. Should be preceded by high school biology Two hours of lectures and recitations, and six hours of laboratory work per week.

Four hours credit.

Second Semester.

CHEMISTRY**A. Introductory Chemistry.**

Prerequisite: One unit of high school algebra or Mathematics A.

This course is designed to give students, entering without high school chemistry, a knowledge of the fundamental principles of general chemistry. A considerable amount of demonstration experiments is included. A minimum of five class hours is required each week.

Four hours credit.

Each Semester.

1. General and Inorganic Chemistry.

Prerequisites: High school chemistry or Chemistry A; one unit of high school algebra or Mathematics A.

A study covering the fundamental laws and theories of chemistry with particular emphasis on formulae, equations, chemical problems, atomic structure, valence, solutions and the theory of ionization. The principles are developed and illustrated in connection with a study of oxygen, hydrogen, chlorine, and their compounds.

Students electing Course 1 should plan to elect Course 2 the second semester as the two courses form a unit and are designed to equip the student for advanced work.

Four recitations and two two-hour laboratory periods per week.

Four hours credit.

Each Semester.

2. General and Inorganic Chemistry.

Prerequisite: Course 1 or its equivalent.

Course 2 is a continuation of Course 1. It includes a study of sulphur, nitrogen, phosphorus, and their compounds, the periodic table, carbon and its simpler compounds, the metallurgy of the more common metals and the preparation and properties of their important compounds.

Four recitations and two two-hour laboratory periods per week.

Four hours credit.

Each Semester.

5. General Inorganic Chemistry.

Prerequisites: High school chemistry or Chemistry A; one unit of high school algebra or Mathematics A.

This course is required of all first year students taking Engineering. Those entering without high school chemistry should elect Course 1 or Course A. The fundamental principles of chemistry are developed to illustrate the scientific method. The descriptive chemistry of some of the non-metallic elements and of the more important metallic elements is studied. Special emphasis is placed on facts of importance to engineers. Four discussion recitations and two three-hour laboratory periods each week.

Five hours credit.

First Semester.

6. Chemistry of Engineering Materials.

An elementary study of the manufacture and properties of the ferrous and non-ferrous alloys, cements, clay products, protective coatings, fuels and water softening. Four lectures or recitations per week.

Three hours credit.

Second Semester.

21 Qualitative Analysis.

Prerequisite: Chemistry 2 or 5.

A course designed to give the student an explanation of laboratory procedure in terms of the principles of general chemistry. Laboratory procedure involves the identification of five groups of common metals through appropriate unknowns, also the identification of the common acid groups. Two discussion recitations and two four-hour laboratory periods per week.

Four hours credit.

First Semester.

22. Organic Chemistry.

Prerequisite: Chemistry 2 or 5.

A first course in the basic principles of organic chemistry which aims to give the student a knowledge of the carbon compounds of both the aliphatic and aromatic series. It will answer requirements of students preparing for medicine, dentistry, pharmacy, agriculture, home economics, biology and other related sciences. Four lectures or recitations per week.

Four hours credit.

Second Semester.

24. Organic Chemistry Laboratory.

The student prepares a number of typical organic compounds and determines their physical constants. Two four-hour laboratory periods per week.

Two hours credit.

Second Semester.

COOPERATIVE VOCATIONAL TRAINING

These courses are open to students who have marketable skills that are directly related to their college curriculum. The counseling is individualized, by a coordinator, to meet the needs of the particular job. The amount of credit will depend on the number of hours the student is employed per week and the nature of the work. The courses are planned to meet the needs of the vocational programs. The transfer value of the credit for cooperative vocational training will depend entirely on the policies of the senior colleges.

21 and 22. Cooperative Office Training.

The work will be classified as Accounting, General Office, or Secretarial.

23 and 24. Cooperative Industrial Training.

The work will be classified as Architecture, Drafting, etc.

DRAWING**1. Mechanical and Machine Drawing 1.**

The principles of orthographic projection, practice in making of working drawings, correct drafting-room practice in conventional representation, the use of instruments, practice in freehand and mechanical lettering, reading and checking of drawings, instruction on blue and brown printing, practice in tracing, original drawing on vellum. Three two-hour periods per week with approximately three hours home work.

Three hours credit.

Each Semester.

2. Descriptive Geometry.

Prerequisites: Drawing 1 and Mathematics 9 or its equivalent.

Lectures and individual class room instruction. Emphasis is placed on the ability to visualize the problems and the processes of solution. This course includes problems comprising combinations of the point, line and plane, intersections, developments, warped surfaces, and tangent planes. Three two-hour periods per week with approximately three hours home study

Three hours credit.

Second Semester.

3. Industrial Drawing 1.

Prerequisite: Drawing 2.

A course inspired by the need for a practical introduction to Engineering Drafting and Shop Practice. Time will be spent on shop sketching, typical plant lay-outs, piping drawing, pattern drawing, machine design, and elementary sheet metal layouts, etc. Emphasis will be on developing clear shop drawings from shop sketches and notes. Practical application of pictorial representation and orthographic projection will be the keynote.

Three hours credit.

Each Semester.

4. Industrial Drawing 2.

Prerequisite: Drawing 3.

A continuation of course 3 with the objective of dealing with actual industrial plant problems. This work will give the student advance practice in the following jigs and fixtures; tools and dies; gears, cams, and mechanisms; sheet metal drawing and development; product design. Field trips will be arranged during the semester.

Three hours credit.

Each Semester.

23. Mechanism and Engineering Drawing.

Prerequisite: Drawing 2.

Sketching from models in orthographic, isometric, and oblique projection. Practice in the making of working drawings from sketches. Analysis of machines, tracing transmission of motion and power, and devising of combinations to accomplish specific purposes. Two two-hour periods per week with approximately the same amount of home work.

Two hours credit.

Each Semester.

ECONOMICS AND BUSINESS**1. Elementary Economics 1.**

A course designed to acquaint the student in a general way with the principles of economics.

Three hours credit.

First Semester.

2. Elementary Economics 2.

Prerequisite: Course 1.

This is a continuation of Course 1. It deals more with applied modern problems in economics.

Three hours credit.

Second Semester.

3. Economic History 1.

The concepts of economic history and the principal features of European economic history. The economy of the medieval manor, the rise of towns, the routes and goods of trade in the Middle Ages; and the economic development of the principal industrial countries of Europe.

Three hours credit.

First Semester.

4. Economic History 2.

A study of the industrial development of the United States, from colonial times to the present. Such forces and factors as the westward movement, the industrial and agricultural revolution, the tariff, public finances, the trust problem, and the labor movement will be discussed.

Three hours credit.

Second Semester.

5. Business Organization.

The organization of business enterprises, forms of organization. The consideration of questions concerning promotion, procedure and personnel, and of marketing.

Three hours credit.

Second Semester.

7 Business Communications. (Previously No. 34).

If possible, this course should be taken at the same time as Typewriting 1.

A thorough review of punctuation, grammar, and spelling in the areas in which difficulties arise in business communications. Business letters and short reports will be basis of major share of course. Study of psychology underlying the writing of successful communications. Special emphasis to sales and follow-up, credit and collection letters; to market and sales analysis reports; and to writing of advertising copy.

Three hours credit.

First Semester.

21. Principles of Economics 1.

An examination of the fundamental principles of Economics. Open only to sophomores.

Three hours credit.

First Semester.

22. Principles of Economics 2.

Prerequisite: Course 21.

Continuation of Course 21. Courses 21 and 22 are designed especially as introductory courses for students intending to specialize in Economics.

Three hours credit.

Second Semester.

23. General Economics 1.

Opening with a brief description of present day industrial organization, the course will consider the fundamental economic principles of production, exchange, and distribution.

Three hours credit.

First Semester.

24. General Economics 2.

Prerequisite: Course 23.

Course 24 will examine the application of the principles studied during the first semester to current problems arising out of the public relationship in industry; problems of labor, money and banking, public utilities, trusts, and taxation.

Three hours credit.

Second Semester.

Courses 23 and 24 are designed to meet the needs of students, particularly in the professional departments, whose work lies entirely outside the field of economics, but who desire a general course in economic principles and problems. No student may receive credit both for Principles of Economics (21 and 22) and for General Economics (23)

25. Merchandising.

This course is designed to give a working, practical knowledge of both textiles and non-textiles. Part I deals with the present day materials — their contents and uses. Part II deals with jewelry, furs, rugs, ceramics, rubber, metals, leathers, etc., their sources and uses.

Three hours credit.

26. Marketing.

The general field of Marketing and distribution of products; marketing functions; methods of middlemen; marketing analysis; the determination of market prices, recent developments in marketing; and forces underlying marketing of the various types of commodities.

Three hours credit.

27. Labor Economics.

A study of the human factor in industry Problems of wages, hours, unemployment, working conditions, and personnel problems are considered.

Three hours credit.

28. Banking and Finance.

A study of commercial banking, central banking, especially the Federal Reserve system, foreign exchange, theory of credit, theory of the value of money, relation of gold, credit, and price levels.

Three hours credit.

29. Business Statistics.

Particular emphasis is placed on the way in which the different statistical techniques are employed in business. Problems based on real situations.

Three hours credit.

Second Semester.

31. Business Law.

A study of the laws regulating business activities and an appreciation of the part which legal institutions play in our economic organization.

Three hours credit.

First Semester.

33. Salesmanship.

In this course emphasis is given to sales methods and their management. Installment selling, agencies, mail order selling, chain stores, advertising practices, and the psychology of advertising are major topics, illustrative of the subject matter in this course.

Three hours credit.

Second Semester.

35. Machine Calculation 1.

A minimum of 60 hours work on the key-driven machines, 5 to 10 hours on the full-keyboard adding listing machines, and 30 hours on the crank-driven machines will be necessary to build an acquaintance with the four fundamental operations of addition, subtraction, multiplication, and division and the applications to payroll, invoicing, percentages, discount, interest, distribution of expense situations. The student should familiarize himself with the variations of manufacturers' makes of these various types of machines and situations in which each excels. Practice on the key-driven machines up to 100 to 120 hours will be needed to gain occupational proficiency.

Three hours credit. Each Semester.

36. Machine Calculation 2.

Prerequisite: Course 35.

Arrangements may be made whereby those persons showing special aptitude and wishing to attain an expert professional skill may continue the above course. Applications of the fundamental operations to all classes of work will be made and high speed gained.

Three hours credit. Each Semester.

37. Records Management and Filing.

The Management of Records includes the choice of method, equipment, flow of work through the department, and those other factors in the handling and storing of records which determine just how the business will operate and how fast and efficiently the work can be accomplished. The course includes practice in the use of various systems of filing, indexing, and coding.

39. Corporate Finance.

An introduction to the principles of the financial policy of corporations. This course treats the problem of promotion of the corporate enterprise, types of corporate securities, the administration of corporate science, failure and reorganization, investment of corporate funds. Emphasis upon the problems of the smaller business unit.

Three hours credit. First Semester.

40. Public Finance and Taxation.

A study of the principles of public expenditures, revenues, public credit, and final administration. The development of taxation and tax systems.

Three hours credit. Second Semester.

EDUCATION

21. Principles of Teaching.

The primary purpose of this course is an examination of the aims toward which teaching should be directed, a discussion of the conditions essential to successful teaching and learning, an analysis of the various types of learning activity with their significance in determining what teaching should accomplish, and an evaluation of the various procedures and practices by which the basic principles of teaching may be applied and a sound technique of teaching developed. Active participation by the student in first hand analysis of teaching problems and critical evaluation of teaching procedure is emphasized. The technique of teaching common school branches is a definite objective of this course. Required of sophomores in the County Normal and State Limited curricula.

Three hours credit.

22. Directed Practice Teaching.

This is a laboratory course requiring two hours a day, five days a week of teaching in connection with class meetings, conferences, and assigned readings. Students are assigned definite problems in teaching which are worked out in actual experience in the training school under supervision.

Four hours credit.

Second Semester.

23. Methods of Teaching 1.

A course in the study of methods in teaching as applied to rural schools; brief consideration of the principles involved in teaching and learning; application of these in selection of subject matter and activities; emphasis upon the technique of teaching reading, writing, spelling, and language activities. Observation of the work of the kindergarten and first six grades in the training school is a part of this course.

Three hours credit.

First Semester.

24. Methods of Teaching 2.

This course is a continuation of Course 23 with emphasis placed upon the teaching of arithmetic, elementary science, and social studies, including geography history and literature.

Three hours credit.

Second Semester.

25. Rural School Management.

This course is designed for students preparing to teach in the rural schools. A study of the principles basic to the effective organization and management of classes in a rural school. Discussion centers upon problems involved in socialization procedures, classroom routine, tests and measurements, records and reports, case studies of behavior problems, individual differences and class adjustments, relations with parents and community. The Michigan Instructional Guide is given special attention.

Three hours credit.

First Semester.

ENGLISH**1. Composition and Literature.**

Four hours of class work including an intensive study of essays, outlining, expository writing, and usage. Two quiz sections, one conference, and one usage section each week. Students passing the English entrance examination are excused from the usage section.,

Three hours credit.

Each Semester.

2. Composition and Literature.

Four hours of class work each week continuing the study of essays and poetry, outlining, expository writing, and usage. The usage section is designed for students who need instruction in fundamentals.

Three hours credit.

Each Semester.

2E. Engineering English.

Prerequisites: English 1 and Speech 1. This course should be taken with Speech 2.

Expository writing. A continuation of English 1, with special emphasis on exposition.

Two hours credit.

Second Semester.

3. Use of Books and Libraries.

This course deals with the technique of using library tools. Included in this study are the use of the card catalog, arrangement and classification of libraries, desk routine, and the use of general reference books. Book selection and bibliographies are also stressed. Actual problems in these fields make up the semester's work. Transfer credit is given for this course at Michigan State College and the Teacher's Colleges of Michigan.

Three hours credit. Each Semester.

9 and 10. Preparatory English.

These courses are for students deficient in English entrance requirements. In preparation for regular freshman English, they emphasize grammar, correct usage, comprehension of reading materials, and clear expression in written composition. The materials and methods of instruction are determined by the needs of the individual students enrolled.

Three hours terminal credit only. Each Semester.

21 Sophomore Course in Advanced Expository Writing.

A study of types of exposition with practice in writing each type. Weekly themes accompanied by detailed sentence outlines. Reading and discussion of essays selected from the works of recognized authors. The course is planned for students who enjoy writing and for those who wish practice in developing clear exposition. Open to students who have completed freshman English satisfactorily. May be elected without English 22. Recommended as an elective for sophomores in any curriculum.

Three hours credit. First Semester.

22. Sophomore Course in Creative Writing.

A study of description and narration. Analysis of selected short stories and a novel. Weekly written work. An effort is made to develop appreciation for imaginative prose. The course is designed for students who want practice in creative writing. It may be elected without English 21. Open to students who have completed freshman English satisfactorily. Recommended as an elective for sophomores in any curriculum.

Three hours credit. Second Semester.

23. Introduction to English Literature. (University of Michigan English 31.)

An intensive study of representative works of four of the following poets: Milton, Wordsworth, Browning, Arnold, and Tennyson. Collateral reading from these and other poets. Also a study of the art and technique of poetry and an analysis of numerous short poems as illustrative material. Except by permission, this course is open only to those who have satisfactorily completed freshman English and have had no other course in English literature. May be elected by sophomores in any curriculum.

Three hours credit. First Semester.

24. An Introduction to Drama. (University of Michigan, English 32)

Prerequisites: Freshman English and English 23, except by special permission.

A critical study of five of Shakespeare's principal plays (four tragedies and one comedy), one Greek play and one modern play. Collateral readings include other Shakespearean plays. Short written discussions relating to dramatic technique and subjects. This course is the normal continuation of English 23.

Three hours credit. Second Semester.

FRENCH

1. Elementary French.

Grammar and easy reading. Pronunciation. For transfer purposes this course must be followed by Course 2.

Four hours credit. First Semester.

2. Elementary French.

Prerequisite: French 1 or one year of high school French.

Four hours credit. Second Semester.

Continuation of Course 1.

3. Elementary French of the Second Year.

Prerequisite: French 2 or two years of high school French.

Modern prose and plays, with practice in speaking and writing.

Four hours credit. First Semester.

4. Modern Prose and Plays.

Prerequisite: Course 3, or 3 years of high school French.

Four hours credit. Second Semester.

5. A modification of Course 3 for students entering with 3 years of high school French.

Three hours credit. First Semester.

21. Introduction to French Literature.

Prerequisite: Courses 3 and 4 or 4 years of high school French.

Representative authors of various periods.

Three hours credit. First Semester.

22. Introduction to French Literature.

Prerequisite: Course 21.

Representative authors of the seventeenth and eighteenth centuries.

Three hours credit. Second Semester.

Note: Courses 21 and 22 usually alternate with Courses 23, 25 and 24, 26.

23. Composition.

Based on geography, history, and literature.

Two hours credit. First Semester.

24. Continuation of Course 23.

Two hours credit. Second Semester.

25. Oral Composition.

Based on plays, travel, and biography. Two class hours per week.

One hour credit. First Semester.

26. Continuation of Course 25.

One hour credit. Second Semester.

GEOGRAPHY

3. Economic Geography.

The course will open with a short survey of the geographic reasons for regional specialization of commodities and localization of industries. The regional competition for markets, transportation factors, and port studies will be included in the course. This course is recommended for students interested in business, commerce, secretarial work, and those planning to teach commercial subjects.

Four hours credit.

5. Introductory Regional Geography. (Course 1, University of Michigan.)

A critical study describing the major regions of the world, their basic physical characteristics, and the changes brought about in the stages of human occupation. Discussion of text book material, lectures, and collateral reading.

Four hours credit.

6. Geography of Commercial Production. (Course 33, University of Michigan.)

This course aims to give the geographic distribution of the primary commodities of world trade, and to show the relationship between the commodities and the natural environment of the areas in which they are produced. Lectures, discussions and collateral reading.

Four hours credit.

Note: Students electing Geography 5 and 6 should not elect Geography 1, 2, 3, or 33 at the University of Michigan, but may elect any other course.

21. Geography of North America. (Course 110, University of Michigan.)

Prerequisites: Courses 5 and 6 or permission of the instructor.

A systematic study of the regional divisions of North America will be made in this course. The United States, Canada, Alaska, Mexico, and the West Indies will be considered as to regional contrasts, conditions of life, and the distribution and character of their population. Independent reading and research on selected topics will be required.

Three hours credit.

22. Geography of Asia. (Course 113, University of Michigan.)

Prerequisites: Courses 5 and 6 or permission of the instructor.

A general picture of the natural and cultural landscape of Asia will be considered first. This will be followed by a regional division of the continent and a study of each region according to the activities of the people in relation to the natural setting and the problems of development which the various countries are facing. Independent reading and research on selected topics will be required.

Three hours credit.

GEOLOGY

1. Physical Geology.

The earth's features, treated with special reference to their origin and significance; agencies effecting changes in geographic features; physiographic changes in progress; the effect of man's physical environment upon his distribution, his habits and occupations. The course includes an introductory study of common rocks and rock-forming minerals, an interpretation of topographic maps, and the fundamental principles of meteorology. Three classroom periods, and one laboratory period of two hours per week with occasional field trips.

Four hours credit. First Semester.

2. Historical Geology.

A study of the fundamental problems involved in dynamical, structural, and historical geology. The history of the earth is studied from its origin to the present. Successive stages are followed in the development of North America as a typical continent; the formation of mountains, plains, and the evolution of the life of the land and seas. The course includes the determination of common rocks and minerals, and the interpretation of geologic maps. Three classroom periods, and one laboratory period of two hours per week supplemented with field work.

Four hours credit.

Second Semester.

GERMAN

1. Elementary German 1.

The primary objective of the course is to develop the ability to read standard German. There will be, however, constant practice in oral reading and group singing, opportunity to hear recordings by native Germans and emphasis upon the oral use of phrases and idioms frequent in conversation.

Four hours credit.

First Semester.

2. Elementary German 2.

Prerequisite: Course 1 or one year of high school German.

Four hours credit.

Second Semester.

HISTORY

5. Prehistoric Times. and European Civilization.

Deals with prehistoric man, ancient states around the Mediterranean Sea and in the Near East, Germanic migrations, the papacy and the monks, the Franks, feudalism. Norman Conquest. Saracens, crusades, Holy Roman Empire, early national monarchies, Italian city-states, Renaissance, and the Commercial Revolution.

Four hours credit.

First Semester.

6. European Civilization from 1500 to the Present Time.

Continuation of Course 5.

Four hours credit.

Second Semester.

23. Political and Constitutional History of the United States to 1865.

Particular attention is given to the colonial period, the divergent English and American political theories, to the causes, chief events, and results of the French and Indian, Revolutionary, Mexican, and Civil Wars and of the War of 1812, to diplomatic entanglements with Europe, to the Articles of Confederation, Constitutional Convention of 1787, Federalist organization, of the new government, Jeffersonian democracy, important Supreme Court decisions, westward movement, the rise of the political power of the west, and to slavery and abolition.

Three hours credit.

First Semester.

24. Political and Constitutional History of the United States from 1865 to the Present.

Continuation of Course 23.

Three hours credit.

Second Semester.

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25. History of Michigan.

Considers prehistoric man in Michigan, New France, the Jesuits, the Iroquois and the Hurons, early French explorers, founding of Detroit, arrival of the English in Michigan, Pontiac's Conspiracy, Michigan connections with the Revolutionary War and with the War of 1812, Northwest Ordinance of 1787, Michigan as a territory and Michigan as a state, with special emphasis on political, economic, social, and educational developments.

Two hours credit.

LATIN**1. Elementary Latin 1**

The course deals with the elements of the language, with the derivation of English from Latin and with the relationship between ancient and modern civilization. Latin is especially desirable for those who wish to improve command over English vocabulary and sentence structure, to broaden cultural background and understanding of current history, or to prepare for the several professions whose specific vocabularies are largely of Latin origin.

Four hours credit.

First Semester.

2. Elementary Latin 2.

Prerequisite: Course 1 or one year of high school Latin.

Four hours credit.

Second Semester

MATHEMATICS

Entrance requirements in mathematics:

Most colleges and universities will admit students who have had no preparation in high school mathematics, provided they present a sufficient number of academic units in other fields of study. However, a preparation in elementary algebra and plane geometry is essential for various college courses, particularly chemistry, physics, and advanced mathematics, subjects that are required in degree programs such as:

1. agriculture, 2. architecture, 3. business administration, 4. dentistry, 5. engineering, 6. Forestry and conservation, 7. home economics, 8. medical technology, 9. medicine, 10. nursing, 11. pharmacy, 12. police administration, 13. public administration, 14. veterinary medicine.

Although deficiencies in mathematics may be removed in Junior College, time spent in doing this may interfere with regular progress in other subjects in the curriculum.

A. Elementary Algebra.

A beginning Algebra course covering the same material as the first year of Algebra in high school.

Four hours terminal credit only.

B. Plane Geometry.

This course covers the same material as a year of Plane Geometry in high school.

Four hours terminal credit only.

1. School Algebra.

Prerequisites: Courses A and B or their equivalent in high school mathematics.

Variation and proportion; logarithms; graphs; exponents; radicals; fractions; factoring; linear equations and quadratics.

Two hours credit.

2. Trigonometry.

Prerequisites: Courses A, B and 1 or their equivalent in high school mathematics.

Radian measure; co-ordinate systems; trigonometric ratios; identities and equations; inverse functions; graphs; logarithms; reduction and addition formulas; laws of sines, cosines, and tangents; solution of triangles and area formulas.

Two hours credit.

3. College Algebra.

Prerequisites: Courses A, B and 1, or their equivalent in high school mathematics.

This course is offered for students who are taking Business Administration, Hotel Management, or any course not requiring analytic geometry

Exponents and radicals; quadratics; inequalities; mathematical induction; binomial formula; progressions; theory of equations; Descartes' rule; Horner's method of finding roots and determinants.

Two hours credit.

5. College Algebra and Plane Analytic Geometry.

Prerequisites: Courses A, B, 1 and 2 or their equivalent in high school mathematics.

Review of exponents, radicals, quadratic equations; complex numbers; theory of equations; Horner's method for finding irrational roots; determinants; cartesian coordinates; loci; symmetry; lines; circles and conic sections.

Four hours credit.

First Semester.

6. Plane and Solid Analytic Geometry

Prerequisites: Courses 5 and 9.

Coordinate transformations; properties of conics involving tangents, diameters, asymptotes, parametric equations; tracing of algebraic curves; polar coordinates; space coordinates; plane; straight line; quadric surfaces; space curves; introduction to the calculus; functions; limits, continuity; derivative, slope, rate of change; differentiation of algebraic functions and applications of the derivative.

Four hours credit.

Second Semester.

7. Trigonometry, College Algebra, and Plane Analytic Geometry.

Prerequisite: Courses A, B and 1 or their equivalent in high school mathematics.

Topics the same as in course 2 and course 5 to the circle.

Five hours credit.

First Semester.

8. Plane and Solid Analytic Geometry.

Prerequisite: Courses 7 and 9.

Continuation of course 7. Circles; conic sections and all topics as in course 6.

Five hours credit.

Second Semester.

9. Solid Euclidean Geometry.

Prerequisites: Courses A and B or their equivalent in high school mathematics.

Formulas; basic constructions and propositions; original exercises; mensuration.

Two hours credit.

27. Calculus.

Prerequisites: Courses 5 and 6, or 7 and 8.

Applications of the theory of maxima and minima, the differential; rectilinear and curvilinear motion; discontinuities; differentiation of algebraic, trigonometric, exponential, logarithmic and hyperbolic functions; curvature; indeterminate forms; curve tracing; and integration.

Four hours credit.

First Semester.

28. Calculus 2.

Prerequisite: Course 27

Definite integral; applications of integration; centroids; moments of inertia; fluid pressure; infinite series; Maclaurin's series; Taylor's series; partial differentiation; multiple integrals; introduction to differential equations.

Four hours credit.

Second Semester.

30. Business Computation.

Combinations; special cases and short method used in combinations, rapid calculation; different method of proof in checking results; reciprocals; fractions and mixed numbers; decimals; mensuration; percentage; interest; discount; logarithms; square root; loans; use of tables.

Three hours credit.

First Semester.

MUSIC

Special ensemble work in music, vocal and instrumental, will be arranged by the music department whenever there is sufficient demand.

1. Elements of Music.

This course deals with the rudiments of music including notation, clefs, keys, syllables, the teaching of rote songs, etc. Required in County Normal and State Limited curricula.

Two hours credit.

3. Band.

Technique of various band instruments and study of band literature. Opportunity is offered for practice and instruction in conducting.

Two hours credit.

Each Semester.

4. Orchestra.

Technique of orchestral instruments, study of orchestra literature and experience in accompanying. Opportunity is offered for practice and instruction in conducting.

Two hours credit.

Each Semester.

Note: Courses 3 and 4 will ordinarily be offered through enrollment in high school classes. Credit as indicated will be granted for graduation. Several senior colleges offering similar courses will transfer credit in certain curricula.

5. A Cappella Choir.

Membership is open to all Junior College students. The work of the choir is directed toward public performances in college and community activities.

Two hours credit.

One hour per Semester.

11, 12, 21 and 22. Theory — Basic Musicianship.

These are basic courses for all students who expect to specialize in music. They correspond to the University of Michigan courses 11, 12, 31 and 32. They are devoted to the analysis of the style of J. S. Bach as found in the chorale harmonizations, and continue through a survey of the styles of Haydn, Mozart, and Beethoven. They are integrated courses and include in their total content:

- a. Correlation of aural, visual, and tactual approaches.
- b. Tones and rhythms in perpendicular and horizontal relationships.
- c. Expression of musical ideas in elementary formal structures.
- d. Correlation with the keyboard work in the basic courses in secondary piano.

Placement examinations will be given to determine the student's background and ability. Those who are deficient will be required to do extra work during the term without credit, until such time as they are able to assimilate the course material with sufficient speed and accuracy to complete the course requirements in the scheduled number of class meetings.

Four hours credit each.

PHYSICAL TRAINING**1 and 2. Physical Fitness.**

Two hours per week required of all first-year students without hours credit. Swimming is not required, but swimming instruction is offered for those who wish it. Six lectures on personal and social hygiene will be given as a part of courses 1 and 2.

Veterans are granted credit in Physical Training. However, they may elect courses 1 and 2 if interested.

PHYSICS**A. Elementary Physics.**

Prerequisites: Mathematics A and B or equivalent in high school mathematics. By special permission one of these may be taken parallel with Physics A.

A general course in elementary physics for students entering without high school physics. This course is designed to meet the needs of those lacking physics as an entrance requirement and also those desiring an elementary survey. Along with recitations, discussions, etc. a considerable amount of demonstration is included. A minimum of five class hours is required each week.

Four hours credit.

Second Semester.

1. General Physics.

Prerequisites: Physics A or high school physics; Mathematics A, B, and 1 or their equivalents in high school mathematics. Trigonometry, is very desirable. For those electing this course without trigonometry, sufficient additional assignments will be made to meet the needs of the course. By special permission the requirement of high school physics will be waived for students having the equivalent of Mathematics 5 and 6.

This course deals with Mechanics, Heat, Magnetism, and Electro-statics. Four hours each week are devoted to recitations, lectures, and quizzes. One three-hour period each week is used for laboratory work.

Four hours credit.

First Semester.

2. General Physics.

Prerequisite: Physics 1.

A continuation of Course 1 with a like distribution of hours covering the subjects of sound, electricity and light.

Four hours credit.

Second Semester.

21. General Physics and Problems.

Prerequisite: H. S. Physics, or Physics A, Trigonometry, and the equivalent of Math. 5. (Math. 5 may by special permission be taken as a parallel course.)

An extension of Course 1 especially adapted to meet the needs of the Engineering students. The additional work is essentially a problem course in which the fundamental quantitative relationships are more fully developed and applied.

Five hours credit.

First Semester.

22. General Physics and Problems.

Prerequisite: Physics 21.

An extension of Course 2 for Engineering students, similar in plan to 21.

Five hours credit.

Second Semester.

21E. Problems.

Designed to supplement Physics 1, making an equivalent of Course 21.

One hour credit.

First Semester.

22E. Problems.

To supplement Physics 2, making an equivalent of Course 22.

One hour credit.

Second Semester.

24. Engineering Mechanics, Statics.

Prerequisites: Physics 21; Mathematics 27 (this may be taken parallel if previous mathematics grades are good)

Forces, components, vectors, moments, couples, methods of sections, stress in frame structures, analytically and graphically; cables, friction, centroids, moments of inertia, shear and bending moment.

Three hours credit.

Second Semester.

PHYSIOLOGY AND HYGIENE

1. Physiology

This course is to give the pupil a knowledge of some of the fundamentals of the parts and functioning of the human body as related to everyday living. It will also form a basis for the course in "Health Education" Some opportunity for work on special topics suited to pupil needs will be given.

Four hours credit.

First Semester.

2. Health Education — Personal Health.

Deals with the functions of the various organ systems of the body, stressing the means of and rules for maintaining the body in good health. This will include mental and sex hygiene. A special effort will be made to enable the student to properly evaluate health advertising and his present health ideals.

Four hours credit.

Second Semester.

POLITICAL SCIENCE**A. American Government.**

A course of six one-hour lectures covering the form and functions of our federal and state governments, and of counties, cities, and villages, and stressing the rights and responsibilities of citizenship. Required of all candidates for graduation, except veterans, who do not elect at least one credit course in political science or in American history

No hours credit.

1 American Government.

A study of the national government and administration. Conducted on the class recitation plan. Open to freshmen and sophomores.

Four hours credit.

First Semester.

2. American Government.

State and local governments and administration. American party system. A continuation of Course 1.

Four hours credit.

Second Semester.

PSYCHOLOGY**1 Applied Psychology — Personal Efficiency.**

A study of effective methods of work and other factors essential for a successful college career. Various psychological and other standard tests will be given as an aid in understanding the needs of each member of the class. This personal inventory will be accompanied by exercises and experiments aimed to establish correct habits of study

Three hours credit.

First Semester.

21. Elementary General Psychology.

A brief survey of the facts of normal human psychology, including demonstrations and group experiments.

Three hours credit.

Each Semester.

SECRETARIAL SUBJECTS**Secretarial Techniques.**

Prerequisites: Typewriting 3, Filing, Economics 7

The course aims to acquaint the advanced secretarial student with the secretarial work in the mailing, stenographic, central filing, duplication, statistical, purchasing, sales, and executive departments of a typical large business office. Dictation may be transcribed either from shorthand notes or dictaphone cylinders. Both lab and lecture sessions.

Three hours credit.

Second Semester.

Shorthand.**1. Theory of Gregg Shorthand.**

Covers the basic theory of Gregg Shorthand. A high reading and copying speed will be attained through wide reading and copying of expertly written shorthand plates. Beginning dictation leading to a minimum speed of sixty words per minute will be given.

Four hours credit.

First Semester.

2. Continued Practice in Word-Building.

Prerequisites: Shorthand 1 and Typewriting 1 or their equivalents. Must be accompanied by Typewriting 2.

At least 45 minutes each day of dictation of letters, interoffice memorandums, office bulletins leading to a minimum speed of 100 words per minute with the majority attaining 125 words per minute on short letters. Much reading and writing of shorthand from expertly written shorthand plates and a thorough review of the spelling, capitalization, and punctuation functions causing difficulty in transcription.

Four hours credit.

Second Semester.

3. Professional Dictation 1.

Prerequisites Shorthand 2 and Typewriting 2. Must be accompanied by Typewriting 3.

The student will build high shorthand writing speed through constant review of shorthand theory mastery of high-speed shortcuts and their derivatives, and practice in reading and writing high-speed takes selected from the Congressional Record. Class dictation will cover a wide range of business vocabularies and at speeds ranging from 80 to 120 words per minute and leading to 140 words per minute.

Four hours credit.

First Semester.

4. Professional Dictation 2.

Prerequisites: Shorthand 3 and Typewriting 3.

Continuation of Shorthand 3. Class dictation will be given at speeds ranging from 105 words per minute and leading up to 175 words per minute.

Four hours credit.

Second Semester.

Typewriting**1. Use and Care of Typewriter.**

Designed to meet the needs of those who wish typewriting skill for home or college personal use, for use in their professional life, and for use vocationally in offices. A minimum cruising speed of 25 words per minute on all types of manuscript, rough draft, letter, and tabulated material should be attained. Considerable practice on letters and tables. Demonstration of ability to compose rough draft material, edit the copy, and type final manuscript with title page, footnote references, and bibliography will be required by typing a term project on typewriting.

Two hours credit.

Each Semester.

2. Continuation of Typewriting 1.

A thorough review of typewriting in the first four weeks through typing of letters, envelopes, file cards, checks, drafts, labels, payrolls, minutes, legal documents, specifications, etc. The class will then be divided into two groups:

A. Stenographic. Goal to transcribe from shorthand notes at three-fourths of speed from printed copy 125 mailable transcripts from various types of material during the semester.

B. Non-Stenographic. Development of a high skill in typing from rough draft and setting up tabulated material common in accounting, sales, and research departments of a business. An acquaintance with the Ediphone and Dictaphone processes and with the duplicating processes of the Ditto and Mimeograph. Those not electing Typewriting 3 may elect to complete the entire series of lessons on one of these two groups of machines.

Two hours credit.

Second Semester.

3. Advanced Transcription.

Prerequisite: Typewriting 2.

This class will be divided into two groups Dictaphone and stenographic.

A. Dictaphone. Eighteen practice records and sufficient practice on commercial records which the student dictates himself so he reaches transcription speed of 125 average-length lines per hour. Complete series of lessons on duplicating machines. Each semester.

B. Stenographic. Transcription of a minimum of 125 mailable letters during the semester from more difficult material. An acquaintance with the Ediphone, Dictaphone, and duplicating machines.

Two hours credit.

First Semester.

SHOP PRACTICE**1 Pattern Making.**

A series of patterns are constructed which illustrate clearly the principles of Pattern Making, covering draft, shrinkage, coring, etc. Each pattern is moulded, giving the student some foundry practice. Time allotted: Four hours a week, one of which is reserved for theory

Two hours credit.

First Semester.

2. Working, Treating and Welding of Steel.

This course has been discontinued.

3. Advanced Pattern Making.

Prerequisite: Shop 1.

Involves the construction of patterns and core boxes for actual machine parts, molded and cast in a commercial foundry under the observation of the class. Several visits to local foundries. Four hours a week, one of which is reserved for theory

Two hours credit.

Second Semester.

4. Machine Shop Practice.

Bench work (chipping and filing), drilling and study of drilling machines, engine lathe practice, grinding, milling machine, gear cutting, forge work, hardening and tempering. Also the scope and trend of modern shop practice and modern machines used. One recitation and one three-hour laboratory period per week.

Two hours credit.

Each Semester.

SOCIOLOGY**21. Principles of Sociology.**

A systematic study of the underlying principles of human relationships, group life, social institutions and social processes including such topics as assimilation, competition, conflict and cultural growth will be stressed. Textbook assignments and collateral reading furnish material for class discussion.

Three hours credit.

First Semester.

22. Modern Social Problems.

Prerequisite: Course 21.

Important facts and points of view dealing with some of the major problems which confront American society will be taken in a rapid survey. Some of the important problems to be studied include, poverty, health, mental diseases, crime, marriage, child welfare and personality adjustments. Textbook, collateral reading, written reports.

Three hours credit.

Second Semester.

SPANISH**1. Elementary Course.**

Pronunciation. Understanding of grammatical constructions accompanied by exercises and easy composition. Daily oral practice. For transfer purposes this course must be followed by Course 2.

Four hours credit.

First Semester.

2. Elementary Course.

Prerequisites: Course 1 or one year of high school Spanish.

Continued oral practice. Reading. Grammar accompanied by exercises and easy composition.

Four hours credit.

Second Semester.

3. Second-Year Spanish.

Prerequisite: One year of college Spanish or two years of high school Spanish.

Careful reading and study of representative modern prose of Spanish and Spanish America. Review and application of the essential principles of grammar by means of oral and written exercises. Composition one day per week. Continued practice in pronunciation and in hearing the spoken language. Some conversation. Outside reading intended to develop the ability to read rapidly at sight.

Selected texts such as "Jose", "El Tesoro de Gaston", "Dona Clarines", "La Pata de Zorra", etc. for use in class.

Four hours credit.

First Semester.

4. Second-Year Continued.

Prerequisite: Course 3 or three years high school Spanish.

Read La Prensa, a Spanish newspaper, one day per week.

Four hours credit.

Second Semester.

5. A modification of Course 3 for students entering with 3 years of high school Spanish.

Three hours credit.

First Semester.

SPEECH**1. Oral Exposition.**

A practice course in public speaking which must be taken with English 1. Written outlines, extempore and impromptu speaking, informal debates, and other exercises. Each student presents about ten five-minute speeches during the semester. Two hours of class-work.

One hour credit.

First Semester.

2. Public Speaking for Engineers.

A study of the problems of organization, illustration, and effective presentation in public address, affording frequent opportunity for practice and class criticism. This course is to be taken with English 2E.

Two hours credit.

Second Semester.

21. Fundamentals of Speech.

A beginning course in the practical problems of speaking before an audience. This course is designed to provide (1) an introductory course in public speaking for those who expect to concentrate in the field of speech, and (2) a course for those who decide to develop proficiency in platform speaking. The work in the course will consist of study, criticism, and practice in the fundamental forms of speaking.

Three hours credit.

First Semester.

22. Public Speaking.

Prerequisite: Speech 21.

A course in platform theory and practice, designed to provide instruction in the essentials of effective public speaking. Speech materials will be studied and various types of short speeches will be prepared and delivered.

Three hours credit.

Second Semester.

23. The Theory of Argumentation.

A study of the preparation of short, argumentative speeches for various occasions. Special attention will be given to platform practice, forms of argument, analysis, evidence, and speech organization. It is recommended that this course be taken by all Pre-Law students.

Three hours credit.

First Semester.

24. The theory and Practice of Argumentation.

Prerequisite: Speech 23.

A continuation of Speech 23 with practice in long and more specialized argumentative speeches and debates. Particular attention will be given to persuasion, motivation, and audience psychology in argument.

Three hours credit.

Second Semester.

25. Practical Speech.

Parliamentary law, business speaking, luncheon club talks, radio speeches, etc.

Three hours credit.

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